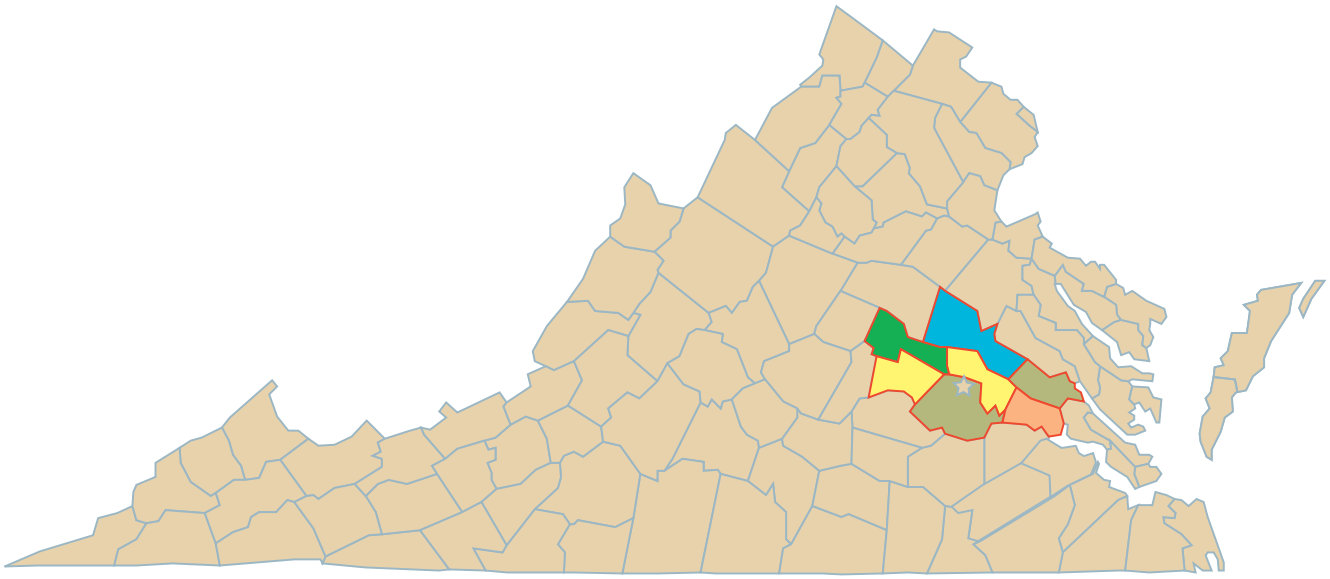
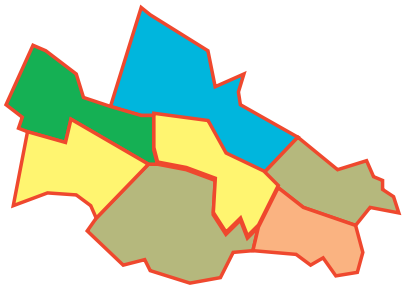
Community Profile of WIA IX

Charles City County • Chesterfield County • Goochland County • Hanover County • Henrico County • New Kent County • Powhatan County





Contents

Executive Summary iii

I. Introduction 1

II. Demographic Profile 2

Population by Age Cohort 3

Population by Race/Ethnicity 4

Population Change 5

Population Projections by Age Cohort 6

English Language Skills 7

Commuting Patterns *8*

III. Economic Profile 11

Unemployment Rate Trends 12

Employers by Size of Establishment 13

Employment by Size of Establishment 13

Employment by Industry 14

New Hires by Industry 15

Turnover by Industry 16

Average Weekly Wage by Industry 17

Age of Workers by Industry 18

Total Employment by Industry 19

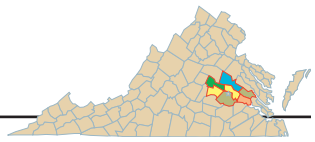
Employment by Major Occupation Group 19

Growth Occupations 20

Declining Occupations 20

Characteristics of the Unemployed 21

Contents



IV. Education Profile 23

Education Level 24

Occupation-Driven Training Projection 25

Annual Occupation-Driven Training Needs in the Richmond-Petersburg MSA, 1998 – 2008 26

Work Skills Projection. 37

Graduate Data 46

WIA IX Training Providers List 54

V. Summary and Conclusions 57

Appendix 58

Average Weekly Wage 58

Unemployment Rate Trends 62

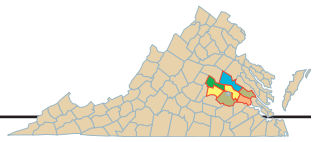
Population by Age 63

Employment by Industry 65

Executive Summary

This report provides a demographic, economic, and educational profile of Workforce Investment Area IX (WIA IX), Capital Area. The purpose of these profiles is to assist on-going strategic planning efforts by providing a solid, data-driven, foundation for strategic decision-making. The primary findings from this report are:

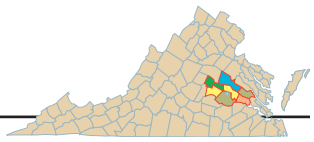
- Between 2000 and 2010, WIA IX will experience a major increase in its 55 and over population. The net result of this trend will be a significant "graying" of the overall population.
- One implication of this trend is that younger entry-level workers will be in short supply.
- WIA IX is experiencing, and will likely continue to experience, increased employment in Services and Retail Trade.
- One implication of this is that the Service sector – specifically, health care and education – is expected to account for much of the demand for trained workers between 1998 and 2008.



I. Introduction

This report provides a community profile of Workforce Investment Area IX (WIA IX). It was produced by the Virginia Employment Commission, with assistance from the Virginia Community College System and the Virginia Economic Development Partnership, at the request of the Special Advisor to the Governor for Workforce Development. It is intended to assist on-going strategic planning efforts within the Workforce Investment Boards by providing a solid, data-driven, foundation for strategic decision-making.

The report is divided into four major sections. The first contains a profile of regional demographic characteristics and trends, the second supplies similar information for the regional economy, and the third provides a profile of regional education characteristics and projected demands for training and skills. These are followed by a summary and conclusion section.



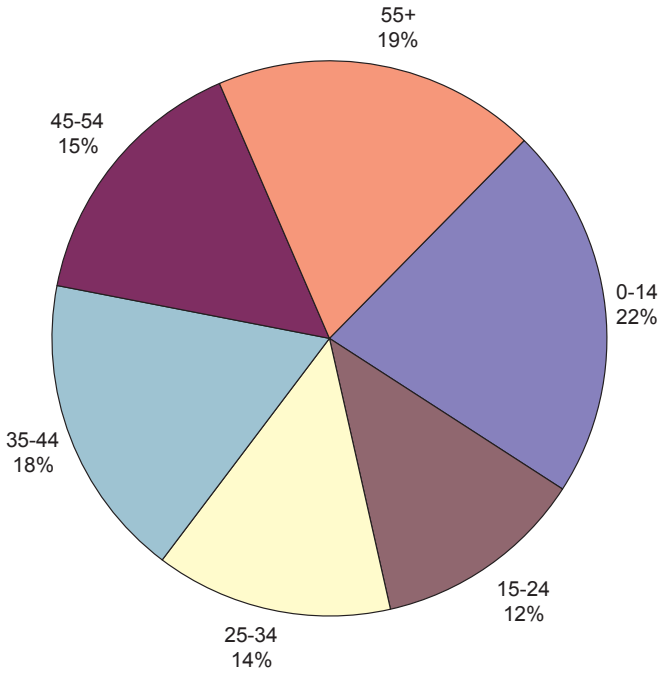
II. Demographic Profile

Population demographics are the single most important factor affecting WIA IX's future labor force. Some key features of the area's population are as follows:

- Smaller proportion of minorities. Where statewide minorities comprise 28 percent of the overall population, in WIA IX they comprise 25 percent of the population.
- Projected to increase by 119,488 persons (or 18.9 percent) between 2000 and 2010. The largest increase is expected in Chesterfield County (56,097), followed by Henrico County (38,700) and Hanover County (19,680).
- Smaller proportion of individuals who "speak English less than well". Where statewide the proportion of individuals five and older who speak English less than well is 2.2 percent, in WIA IX it is 1.3 percent.
- Henrico County draws the largest number of in-commuters (75,380) of any locality within WIA IX, followed by Chesterfield County (39,740) and Hanover County (19,494). A large number of Henrico and Hanover counties', and the majority of Chesterfield County's, in-commuters come from outside WIA IX. On the whole, WIA IX is a net exporter of workers with 71,322 individuals commuting into the area for work, while 114,136 of the area's residents commute to localities outside of WIA IX for work.

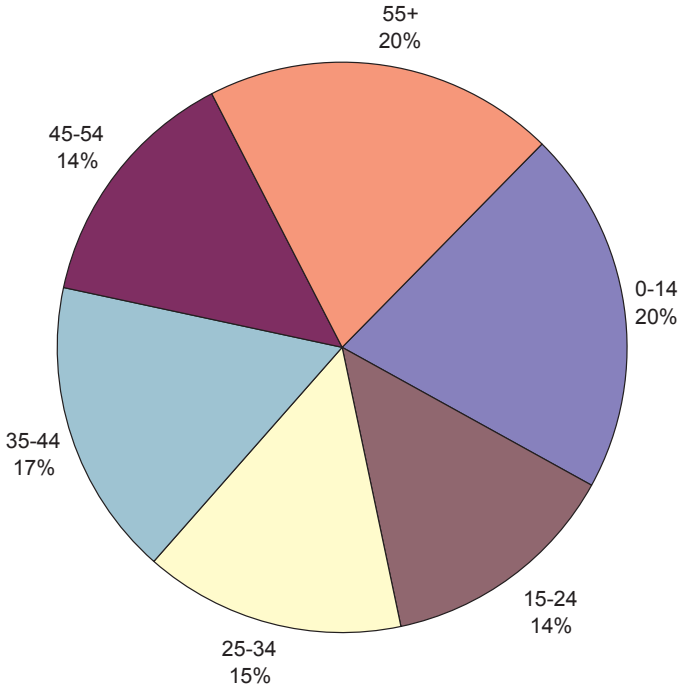
Population by Age Cohort

WIA IX



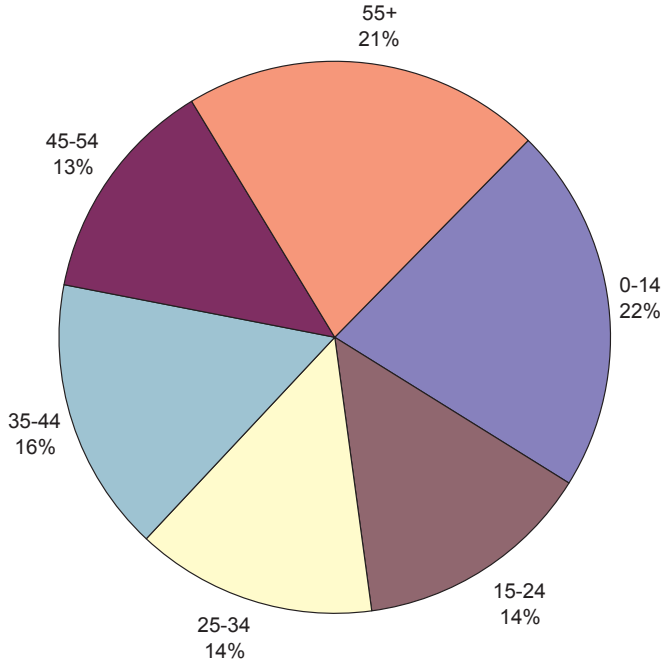
WIA IX	
0-14	145,415
15-24	80,132
25-34	93,060
35-44	120,054
45-54	103,073
55+	126,417
Total	**668,151**

Virginia



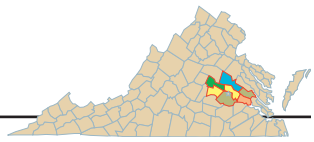
Virginia	
0-14	1,453,452
15-24	963,469
25-34	1,036,911
35-44	1,200,950
45-54	999,548
55+	1,424,169
Total	**7,078,494**

United States



United States	
0-14	60,253,375
15-24	39,183,890
25-34	39,891,724
35-44	45,148,527
45-54	37,677,952
55+	59,266,437
Total	**281,421,906**

Subparts may not add to total due to rounding.
Source: 2000 Census.



Population by Race/Ethnicity

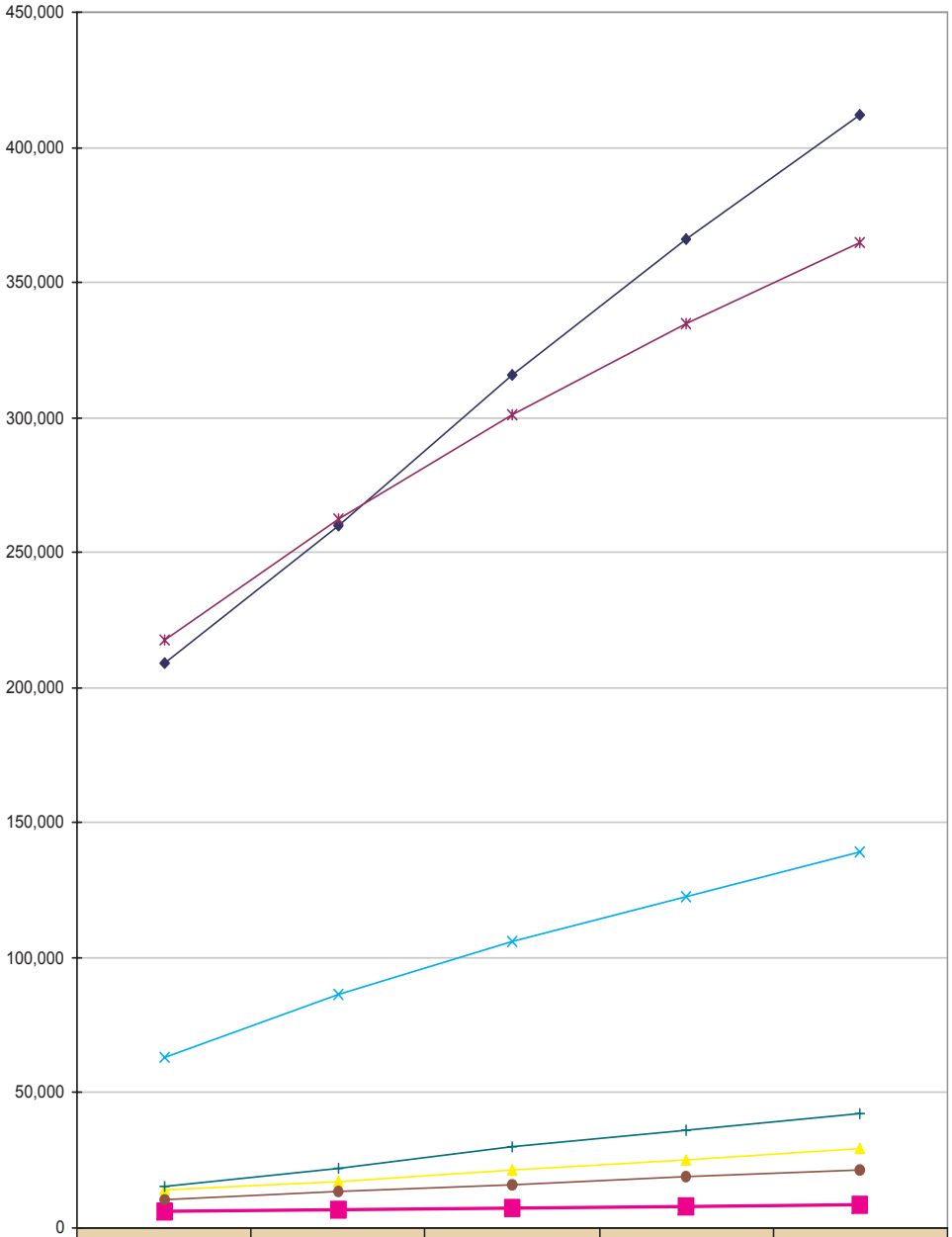
WIA VXI		
Total Population	668,151	100.0%
Race		
White	500,223	74.9%
Black or African American	133,153	19.9%
American Indian and Alaska Native	2,855	0.4%
Asian	16,496	2.5%
Native Hawaiian and Other Pacific Islander	205	---
Other and Multi-Race	15,219	2.3%
Ethnicity		
Hispanic or Latino (of any race)	14,959	2.2%

Virginia		
Total Population	7,078,515	100.0%
Race		
White	5,120,110	72.3%
Black or African American	1,390,293	19.6%
American Indian and Alaska Native	21,172	0.3%
Asian	261,025	3.7%
Native Hawaiian and Other Pacific Islander	3,946	0.1%
Other and Multi-Race	281,969	4.0%
Ethnicity		
Hispanic or Latino (of any race)	329,540	4.7%

United States		
Total population	281,421,906	100.0%
Race		
One race	274,595,678	97.6%
White	211,460,626	75.1%
Black or African American	34,658,190	12.3%
American Indian and Alaska Native	2,475,956	0.9%
Asian	10,242,998	3.6%
Native Hawaiian and Other Pacific Islander	398,835	0.1%
Other and Multi-Race	22,185,301	7.9%
Ethnicity		
Hispanic or Latino (of any race)	35,305,818	12.5%

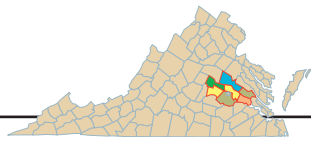
Source: 2000 Census.

Population Change

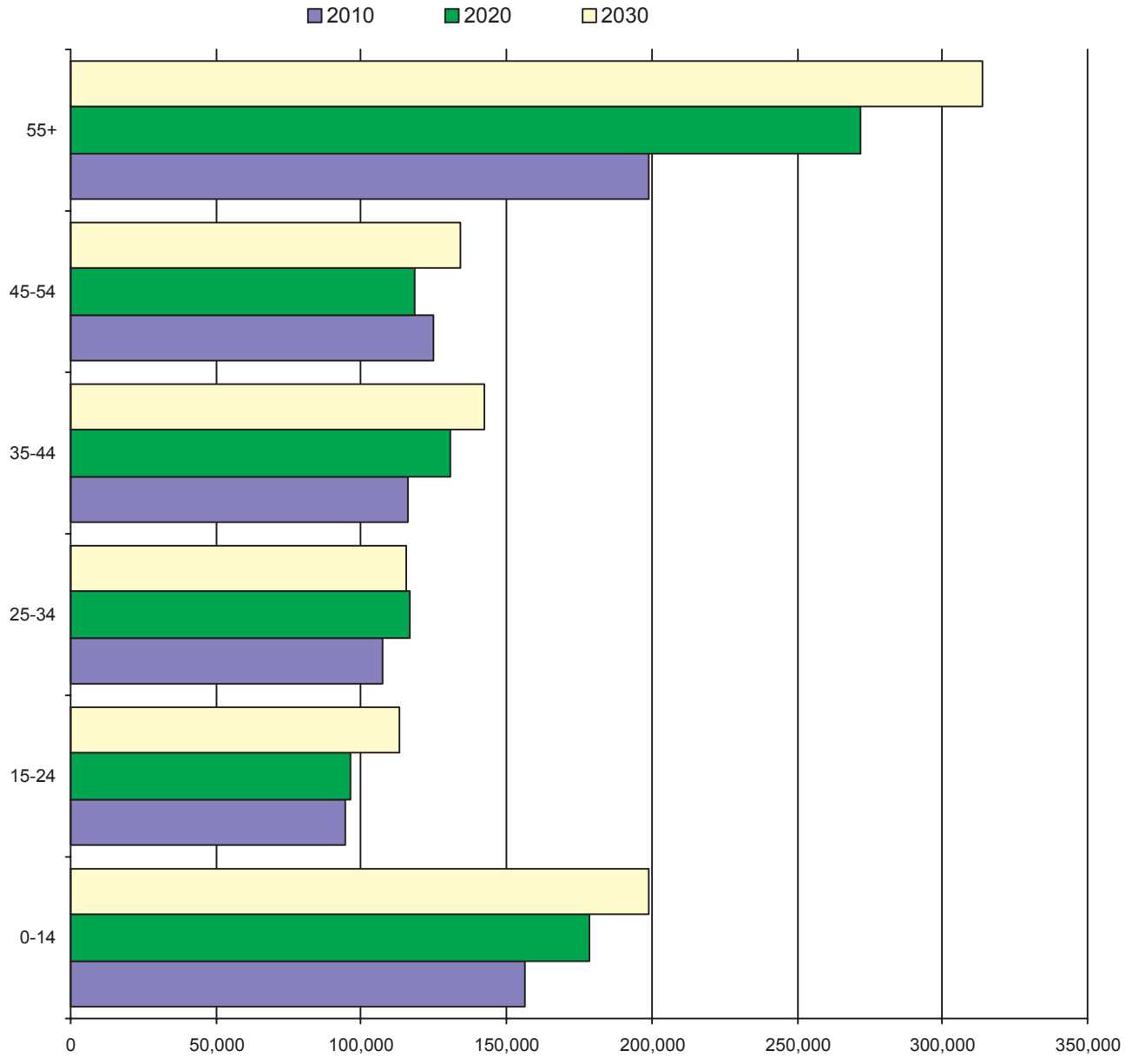


	1990	2000	2010	2020	2030
Charles City County	6,282	6,926	7,400	7,800	8,300
Chesterfield County	209,274	259,903	316,000	366,000	412,000
Goochland County	14,163	16,863	21,400	25,300	29,200
Hanover County	63,306	86,320	106,000	122,800	139,200
Henrico County	217,881	262,300	301,000	335,000	365,000
New Kent County	10,445	13,462	16,200	18,800	21,400
Powhatan County	15,328	22,377	29,900	36,100	42,100
Total	**536,679**	**668,151**	**797,900**	**911,800**	**1,017,200**

Data for 2010 - 2030 are projections. Subparts may not add to total due to rounding.
Source: Virginia Employment Commission, 08/03, U.S. Census Bureau.



Population Projections by Age Cohort



	2010	2020	2030
0-14	156,062	178,305	199,042
15-24	94,531	96,148	112,927
25-34	107,091	116,648	115,322
35-44	116,117	130,401	142,340
45-54	124,914	118,695	134,018
55+	199,185	271,602	313,551
Total	**797,900**	**911,800**	**1,017,200**

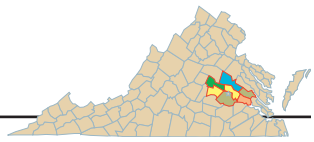
Subparts may not add to total due to rounding.
Source: Virginia Employment Commission.

English Language Skills

(Age 5 and over)

WIA IX		
	Total	Speak English less than well
Charles City County	6,542	23
Chesterfield County	242,866	3,457
Goochland County	15,999	80
Hanover County	80,643	396
Henrico County	244,359	4,004
New Kent County	12,667	57
Powhatan County	21,069	99
WIA IX	**624,145**	**8,116**
Virginia	**6,619,266**	**143,865**
Percent of Individuals who speak English less than well		
Virginia	2.17%	
WIA IX	1.30%	

Source: U.S. Census Bureau.



Commuting Patterns[1]

In-Commute (To)

Out-Commute (From)

	Charles City	Chesterfield	Goochland	Hanover	Henrico	New Kent	Powhatan
Charles City		136		92	878	211	
Chesterfield	63		544	2,298	20,329	37	798
Goochland		423		343	2,929		49
Hanover	8	2,075	485		14,543	56	16
Henrico	145	7,739	1,113	7,697		231	89
New Kent	119	257	25	437	1,631		5
Powhatan		3,423	321	188	1,357		
Total To County/City From WIA IX	335	14,053	2,488	11,055	41,667	535	957
Other VA Localitites	393	25,687	1,342	8,439	33,713	676	1,009
Out of State	28		14			21	
Total to County/ City:	**756**	**39,740**	**3,844**	**19,494**	**75,380**	**1,232**	**1,966**
Total In State	*728*	*39,740*	*3,830*	*19,494*	*75,380*	*1,211*	*1,966*
Total Out of State	*28*	*0*	*14*	*0*	*0*	*21*	*0*

Source: "In-Commuting Patterns" and "Out-Commuting Patterns," 2000 Census data, Virginia Employment Commission, http://www.vec.state.va.us/vecportal/lbrmkt/lmi_menu.cfm

1. Empty cells within the table indicate that the area's commuting represents less than .2% of total commuting or may be zero.
2. Total Commuting to/from WIA= Other VA Localities + Out of State

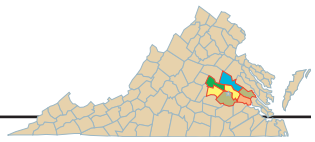
Example of how to use the Commuting Patterns table:

"How many of Chesterfield's residents commute to Charles City County?" On the horizontal or To axis, locate the column labeled Charles City. On the vertical or From axis, locate the row labeled Chesterfield. The intersection of the row and column, 63, is the number of Chesterfield's residents that commute to Charles City County.

Commuting Patterns[1]

	Total From County/ City To WIA IX	Other VA Localities	Out of State	**Total From County/City:**	*Total In State*	*Total Out of State*
Charles City	1,317	1,288		**2,605**	*2,605*	*0*
Chesterfield	24,069	48,780		**72,849**	*72,849*	*0*
Goochland	3,744	2,235		**5,979**	*5,979*	*0*
Hanover	17,183	11,601		**28,784**	*28,784*	*0*
Henrico	17,014	44,482		**61,496**	*61,496*	*0*
New Kent	2,474	3,034		**5,508**	*5,508*	*0*
Powhatan	5,289	2,716		**8,005**	*8,005*	*0*

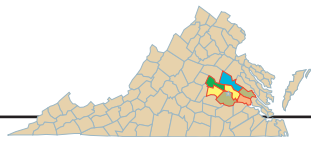
Total WIA Commuting[2]	
Total Commuting To WIA:	71,322
Total Commuting From WIA:	114,136



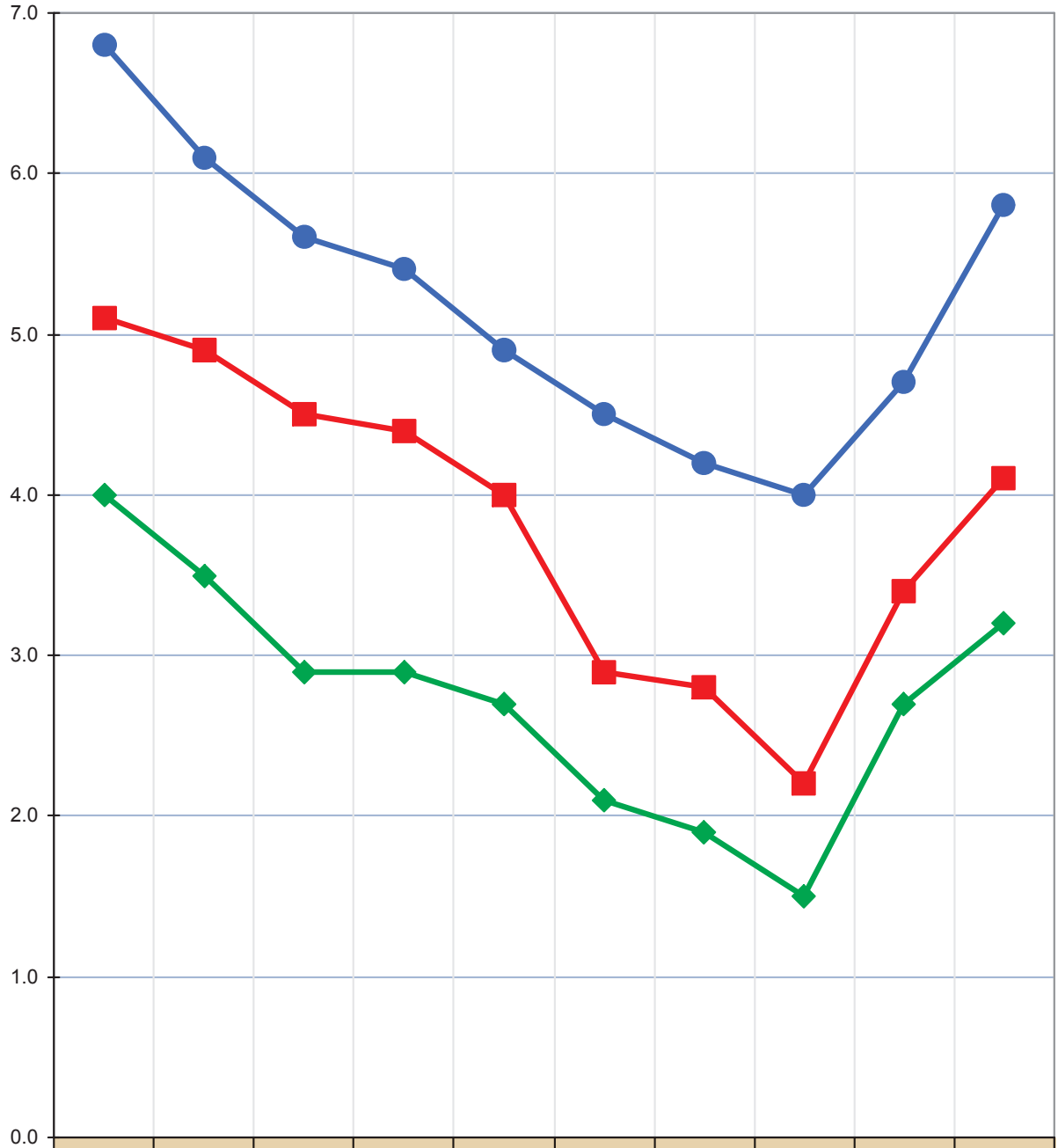
III. Economic Profile

Where population demographics provide information on underlying trends within the labor force, economic data provides more detailed information on the likely demand for specific types of workers. Some key features of WIA IX's economy are as follows:

- Unemployment rates are consistently below the statewide average. In 2002, WIA IX's unemployment rate was 3.2 percent, 0.9 percent above the statewide average of 4.1 percent.
- Employment is concentrated in Retail Trade (14.2 percent), Government (12.4 percent), Finance/Insurance (9.1 percent), and Health Care (8.8 percent).
- Most recent new hires have been in Retail Trade (38.3 percent), Services (31.8 percent), and Construction (11.6 percent).
- Overall personnel turnover is below the statewide average (12.3 percent vs. 13.2 percent). Personnel turnover tends to be highest in Agriculture, Forestry, and Fishing (15.5 percent), followed by Retail Trade (14.9 percent), Construction (14.6 percent), and Services (14.1 percent).
- Weekly wages were highest in Management ($1,218), followed by Utilities ($1,172), Finance/Insurance ($1,110), Wholesale Trade ($971), and Federal Government ($965).
- Industries with the largest proportion of workers at or near retirement age (55 and above) are Manufacturing (14.2 percent), Wholesale Trade (14.1 percent), Services (13.5 percent), Mining (13.0 percent), and Construction (12.4 percent).
- Employment projections indicate that between 1998 and 2008, most employment growth will occur in Services (62,429 additional jobs), Retail Trade (16,127 additional jobs), and Finance, Insurance, and Real Estate (15,860 additional jobs). In contrast, Manufacturing is projected to loose 1,627 jobs, and Federal Government 1,083 jobs.
- Employment projections also indicate that between 1998 and 2008, the biggest growth in occupational employment will be in Systems Analysts (3,010 openings), Adjustment Clerks (2,050 openings), Computer Support Specialists (1,840 openings), Home Health Aides (1,770 openings), and Bill and Account Collectors (1,480 openings). Alternatively, the biggest declines in occupational employment will be in Private Child Care Workers, Peripheral EDP Equipment Operators, and Printing Film Strippers.
- Based on January 2004 Unemployment data, the largest pools of available workers are in the Office and Administrative Support, Management, Sales, and Construction and Extraction occupations.



Unemployment Rate Trends



	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
WIA IX	4.0	3.5	2.9	2.9	2.7	2.1	1.9	1.5	2.7	3.2
Virginia	5.1	4.9	4.5	4.4	4.0	2.9	2.8	2.2	3.4	4.1
United States	6.8	6.1	5.6	5.4	4.9	4.5	4.2	4.0	4.7	5.8

Source: Local Area Unemployment Statistics.

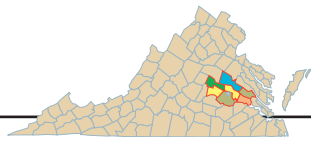
Employers by Size of Establishment

Number of Employees	WIA IX	Virginia
0 - 4	9,870	107,195
5 - 9	3,341	35,763
10 - 19	2,557	25,141
20 - 49	1,828	18,074
50 - 99	658	6,136
100 - 249	368	3,388
250 - 499	93	1,029
500 - 999	35	409
1000 +	21	229
TOTAL	**18,771**	**197,364**

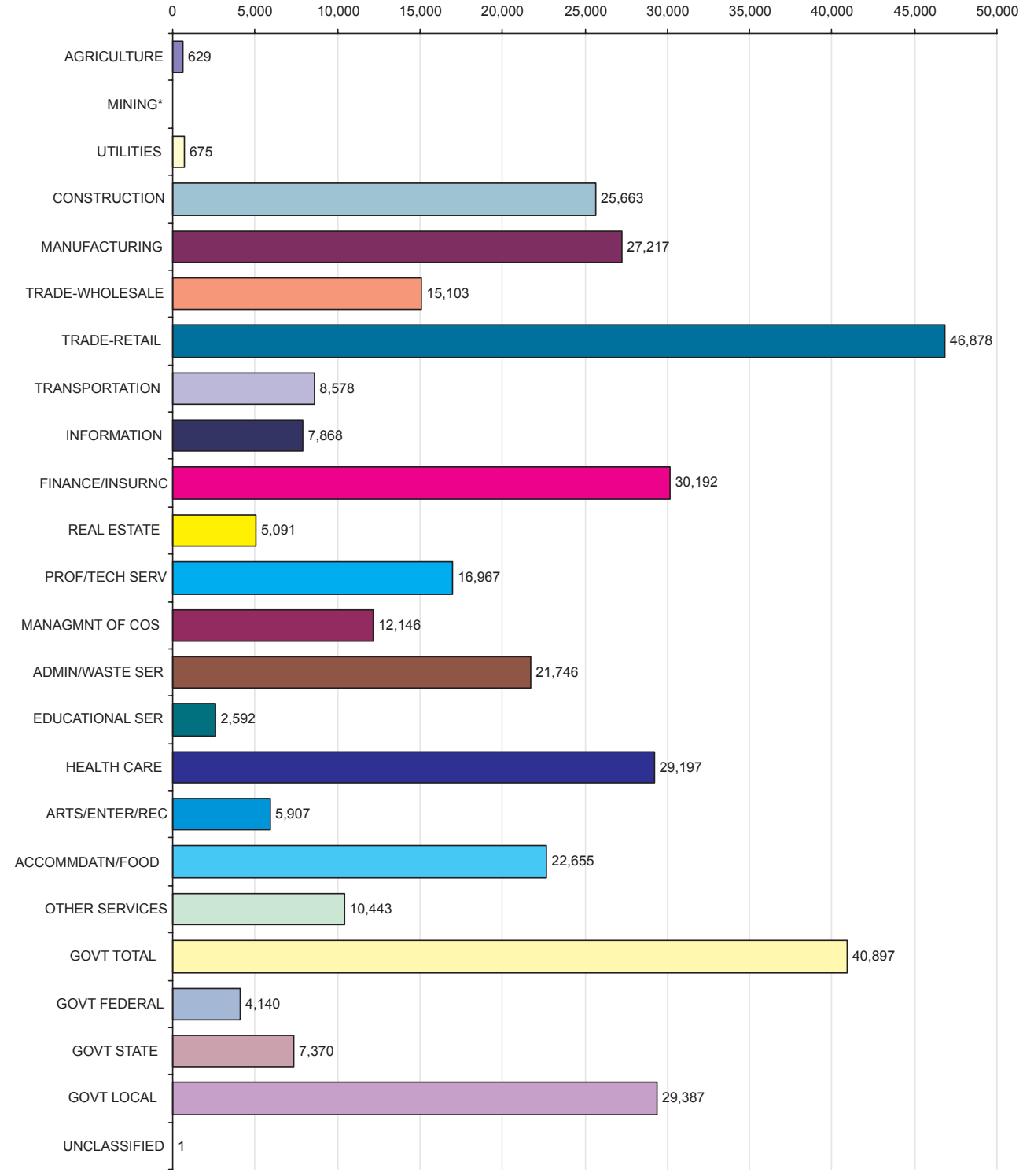
Employment by Size of Establishment

Number of Employees	WIA IX	Virginia
0 - 4	18,060	188,377
5 - 9	22,317	238,634
10 - 19	34,842	340,363
20 - 49	55,703	553,221
50 - 99	45,127	422,392
100 - 249	54,603	503,348
250 - 499	32,163	352,727
500 - 999	22,946	274,493
1000 +	49,014	543,583
TOTAL	**334,775**	**3,417,138**

Source: Covered Employment and Wages, 3rd Quarter 2003.



Employment by Industry

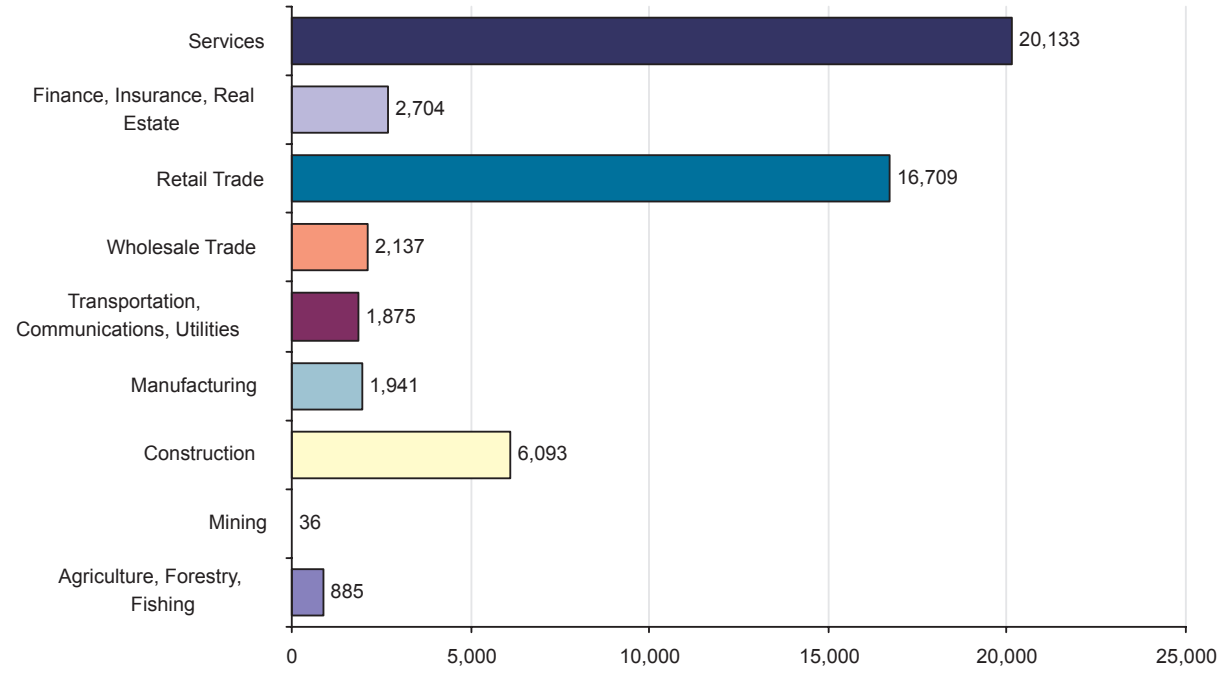


Total: 330,793

Source: Covered Employment and Wages, annualized 2002.
* Non-disclosed data

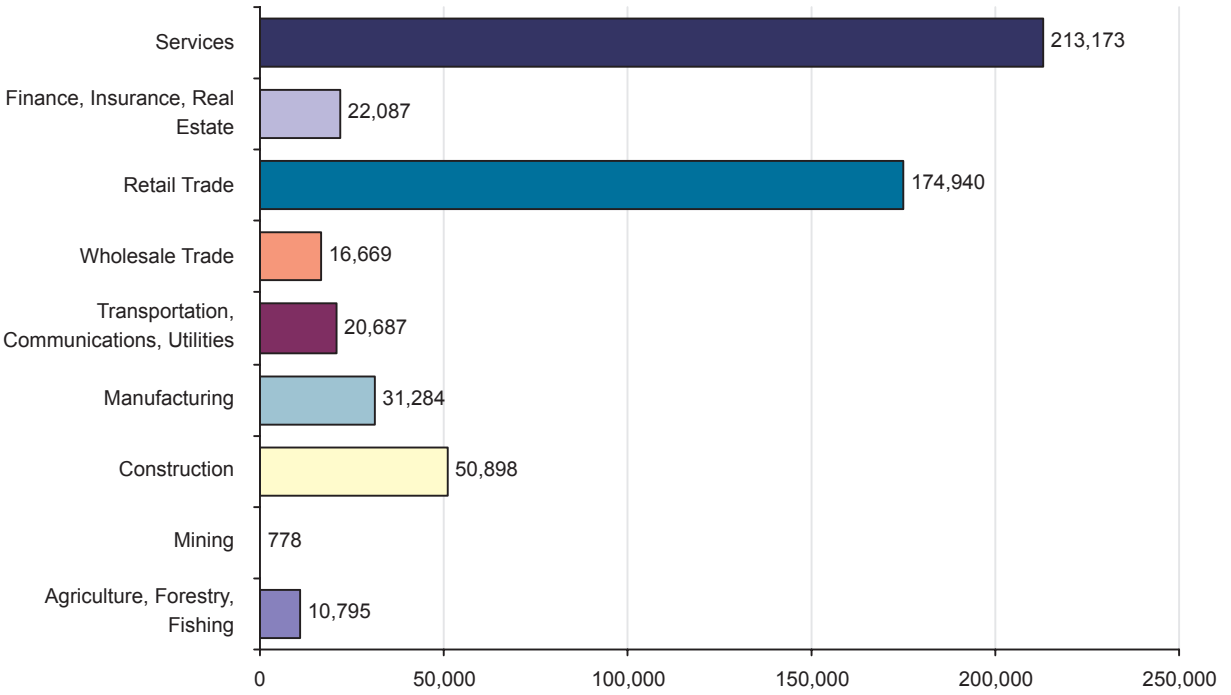
New Hires by Industry

WIA IX



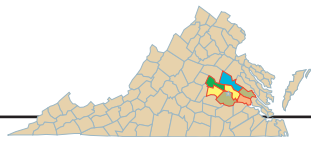
Total: 52,515

Virginia

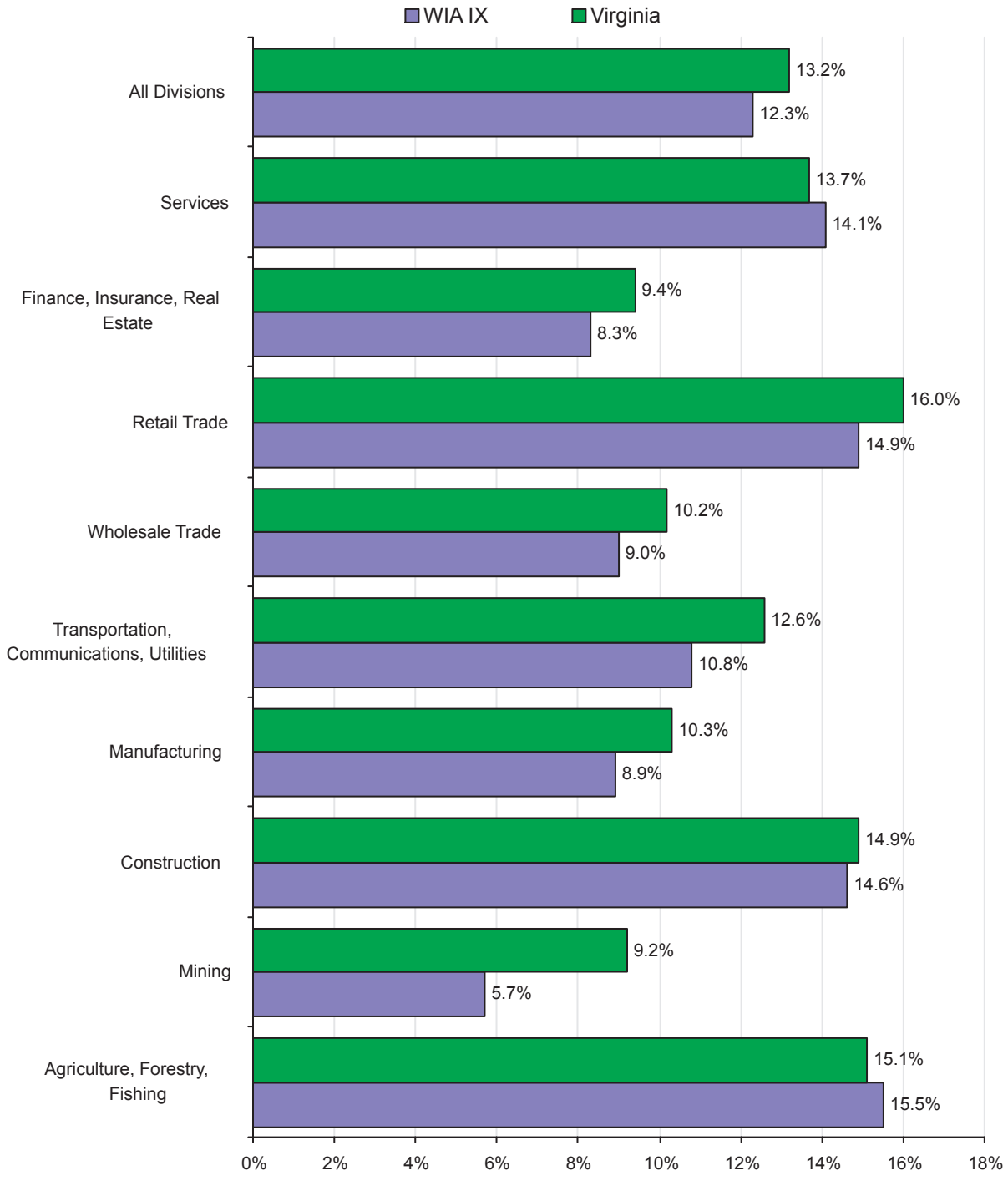


Total: 541,323

Source: U.S. Census Bureau, Local Employment Dynamics (LED) Program, 2002 annual averages.

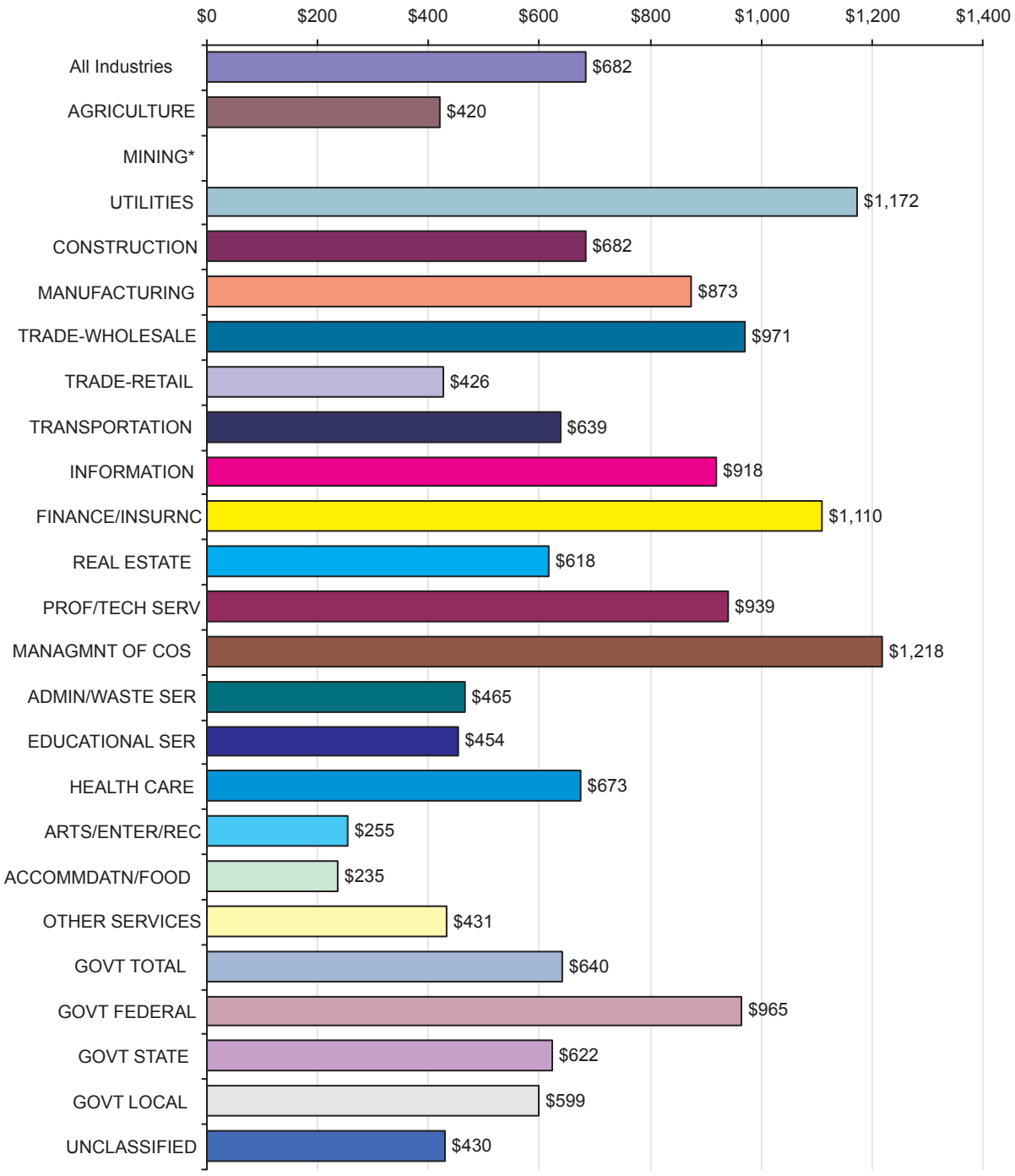


Turnover by Industry

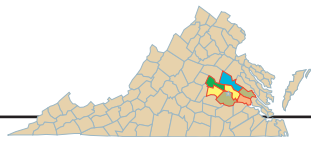


Source: U.S. Census Bureau, Local Employment Dynamics (LED) Program, 2002 annual averages.

Average Weekly Wage by Industry



Source: Covered Employment and Wages, annualized 2002.
* Non-disclosed data



Age of Workers by Industry

WIA IX Virginia

	14 - 18	19 - 21	22 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 99	14 - 99
Total Employment	12,837	17,819	19,167	69,041	75,898	58,031	26,955	7,657	287,404
	106,356	162,652	180,601	659,050	739,013	576,728	282,064	81,995	2,788,457
Agriculture, Forestry, and Fishing	252	344	330	1,009	837	586	247	132	3,736
	2,219	3,048	3,158	9,842	9,481	6,372	2,705	1,600	38,424
Mining	0	21	29	152	231	188	83	10	714
	22	221	366	1,702	2,803	3,498	1,129	136	9,876
Construction	528	1,357	1,525	5,826	7,009	4,918	2,279	726	24,168
	3,907	10,799	13,521	50,770	61,204	41,178	18,359	6,009	205,745
Manufacturing	204	668	1,088	6,020	9,004	7,871	3,635	463	28,953
	2,142	9,334	14,693	72,949	106,504	94,364	46,938	7,579	354,504
Transportation, Communications, and Utilities	120	594	932	4,114	4,661	3,642	1,379	249	15,690
	1,059	4,542	8,097	42,450	52,051	40,960	16,851	3,199	169,208
Wholesale Trade	210	551	844	4,754	6,611	5,170	2,457	509	21,107
	1,691	4,449	6,486	33,407	43,317	32,948	15,708	4,557	142,564
Retail Trade	7,760	8,308	6,041	14,758	14,078	9,922	5,142	2,087	68,095
	67,335	76,880	57,338	136,252	130,099	94,331	48,135	20,155	630,522
Finance, Insurance, and Real Estate	176	1,242	3,020	13,020	11,399	7,911	3,203	580	40,551
	1,775	7,281	13,158	53,760	56,683	42,503	20,070	5,079	200,308
Services	3,586	4,736	5,359	19,387	22,068	17,822	8,530	2,902	84,390
	26,206	46,097	63,782	257,918	276,866	220,571	112,170	33,682	1,037,291

Source: U.S. Census Bureau, Local Employment Dynamics (LED) Program, 2002 annual averages.

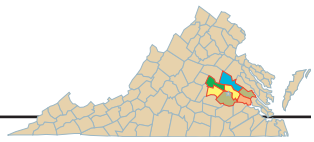
Total Employment by Industry

	Employment			Percent Change	
	Esti-mated 1998	Pro-jected 2008	Change	Total	Annual
Total All Industries	528,315	637,754	109,439	20.71%	1.90%
Agriculture, Forestry and Fishing, Total	5,692	6,188	496	8.71%	0.84%
Mining, Total	806	684	-122	-15.14%	-1.63%
Construction, Total	32,551	35,634	3,083	9.47%	0.91%
Manufacturing, Total	61,152	59,525	-1,627	-2.66%	-0.27%
Durable Goods Manufacturing, Total	21,872	22,649	777	3.55%	0.35%
Nondurable Goods Manufacturing, Total	39,280	36,876	-2,404	-6.12%	-0.63%
Transportation and Public Utilities, Total	32,010	35,521	3,511	10.97%	1.05%
Transportation, Total	21,220	23,818	2,598	12.24%	1.16%
Communications and Utilities, Total	10,790	11,703	913	8.46%	0.82%
Wholesale and Retail Trade, Total	125,060	143,453	18,393	14.71%	1.38%
Wholesale Trade, Total	30,859	33,125	2,266	7.34%	0.71%
Retail Trade, Total	94,201	110,328	16,127	17.12%	1.59%
Finance, Insurance, and Real Estate, Total	45,559	61,419	15,860	34.81%	3.03%
Services, Total	172,188	234,617	62,429	36.26%	3.14%
Federal Government (Except Post Office)	12,012	10,926	-1,083	-9.04%	-0.94%
State Government (Except Education and Hospitality)	23,680	27,510	3,830	16.17%	1.51%
Local Government (Except Education and Hospitality)	17,605	22,277	4,672	26.54%	2.38%

Employment by Major Occupation Group

	Employment			Openings		
	Estimated 1998	Projected 2008	% Change	Replacements	Growth	Total
Total, All Occupations	528,300	637,746	20.72%	125,540	109,446	235,100
Executive, Administrative and Managerial Occupations	37,708	44,533	18.10%	6,670	6,825	13,510
Professional Specialty Occupations	115,620	150,373	30.06%	22,650	34,753	57,490
Marketing and Sales Occupations	67,072	80,951	20.69%	20,090	13,879	33,960
Administrative Support Occupations, Clerical	96,790	114,251	18.04%	20,240	17,461	37,710
Service Occupations	77,505	95,195	22.82%	24,190	17,690	41,890
Agriculture, Forestry, and Fishing Occupations	7,576	8,740	15.36%	2,040	1,164	3,200
Precision Production, Craft and Repair Occupations	52,430	58,549	11.67%	12,320	6,119	18,430
Operators, Fabricators, and Laborers	73,599	85,154	15.70%	17,340	11,555	28,910

Source: Industry and Occupational Employment Projections, 1998 — 2008.
Projections are for the Richmond-Petersburg MSA.



Growth Occupations

	Employment			Openings			Wages
	Estimated 1998	Projected 2008	% Change	Replacements	Growth	Total	Median Annual Wage
Computer Engineers	1,005	2,170	115.92%	60	1,165	1,230	$65,166
Computer Support Specialists	1,707	3,435	101.23%	110	1,728	1,840	$41,997
Credit Checkers	618	1,139	84.30%	40	521	560	$27,535
Database Administrators	326	596	82.82%	50	270	320	$52,689
Bill & Account Collectors	1,381	2,495	80.67%	370	1,114	1,480	$28,646
Systems Analysts	3,572	6,358	78.00%	220	2,786	3,010	$62,790
Athletes, Coaches, Umpires	213	373	75.12%	80	160	240	$40,521
Paralegals & Legal Assistants	730	1,262	72.88%	60	532	590	$26,522
Economists	332	563	69.58%	70	231	300	$76,790*
New Accounts Clerks, Banking	904	1,509	66.92%	290	605	900	$20,730*
Home Health Aides	2,210	3,668	65.97%	310	1,458	1,770	$16,819
Physician Assistants	240	398	65.83%	40	150	200	$56,157
Desktop Publishing Specialists	155	257	65.81%	30	102	130	$33,810*
Loan & Credit Clerks	1,455	2,341	60.89%	150	886	1,040	$29,122
Adjustment Clerks	3,185	5,028	57.86%	210	1,843	2,050	$27,250
Ushers, Lobby Attendants, & Ticket Tkrs	428	670	56.54%	80	242	320	$14,178
Personal & Home Care Aides	604	944	56.29%	160	340	500	$15,471
Medical Assistants	1,010	1,578	56.24%	250	568	820	$23,127
Management Analysts	1,378	2,104	52.69%	110	726	840	$53,527
Health Diagnostics Teachers, Pstscndry	341	519	52.20%	90	178	270	$50,444

Declining Occupations

	Employment			Openings		
	Estimated 1998	Projected 2008	% Change	Replacements	Growth	Total
Typesetting & Composing Machine Oprs	69	27	-60.87%	10	-42	10
Railroad Brake, Signal & Switch Oprs	62	30	-51.61%	20	-32	20
Houskeepers & Butlers, Private	58	31	-46.55%	10	-27	10
Directory Assistance Operators	97	61	-37.11%	20	-36	20
Station Installers & Repairers, Telephone	116	74	-36.21%	40	-42	40
Peripheral EDP Equipment Operators	167	107	-35.93%	20	-60	20
Film Strippers, Printing	128	83	-35.16%	20	-45	20
Child Care Workers, Private	378	254	-32.80%	170	-124	170
Statement Clerks	104	77	-25.96%	10	-27	10
Transportation Attendants	103	78	-24.27%	20	-25	20

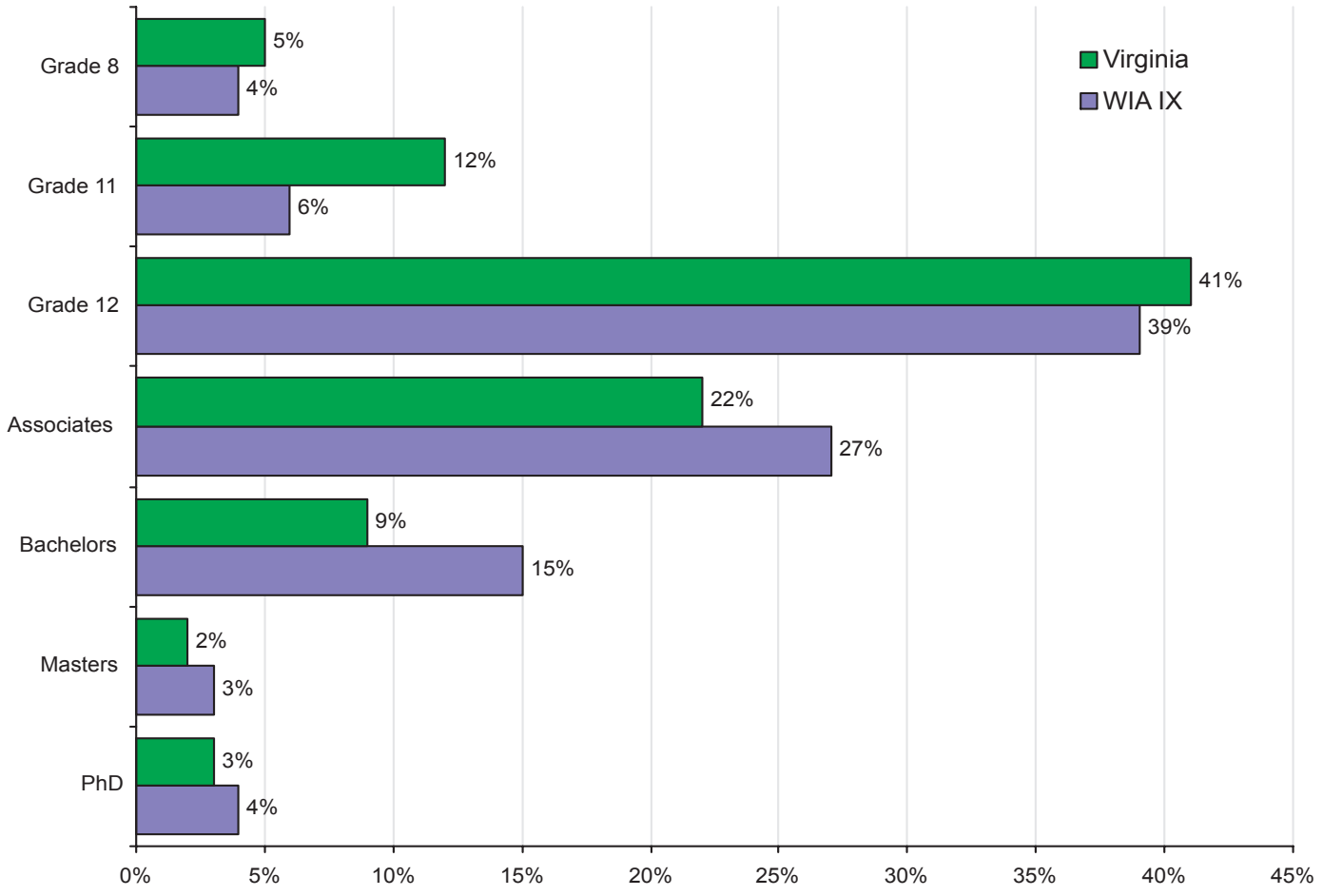
Source: Industry and Occupational Employment Projections, 1998 — 2008. OES Occupational Wage Data
Projections data is for the Richmond-Petersburg MSA. Wages are for WIA IX.

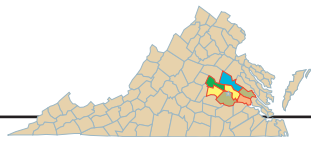
Characteristics of the Unemployed

Marketing the local labor force to new or expanding companies requires information about potential employees that would be available for immediate hire. Monthly data, collected as unemployed individuals apply for unemployment insurance benefits, provide information on various characteristics of the unemployed claimants. Demographic characteristics are recorded for age, race, sex, and education level. In addition, the industry of last employment and the occupation held in the most recent job is also part of the information collected when applicants register for unemployment insurance benefits.

As seen in the chart below, 39% of the unemployed claimants in Capital Area have a grade 12 education level, compared to 41% of claimants statewide. However, for every level of education from Associates degree and higher, Capital Area has a higher percentage of unemployed claimants than the state. Capital Area has 5,924 unemployed claimants with at least an Associates degree, while many other regions of the state have a much smaller ratio of claimants with post-secondary education.

Unemployed Claimants by Education Level





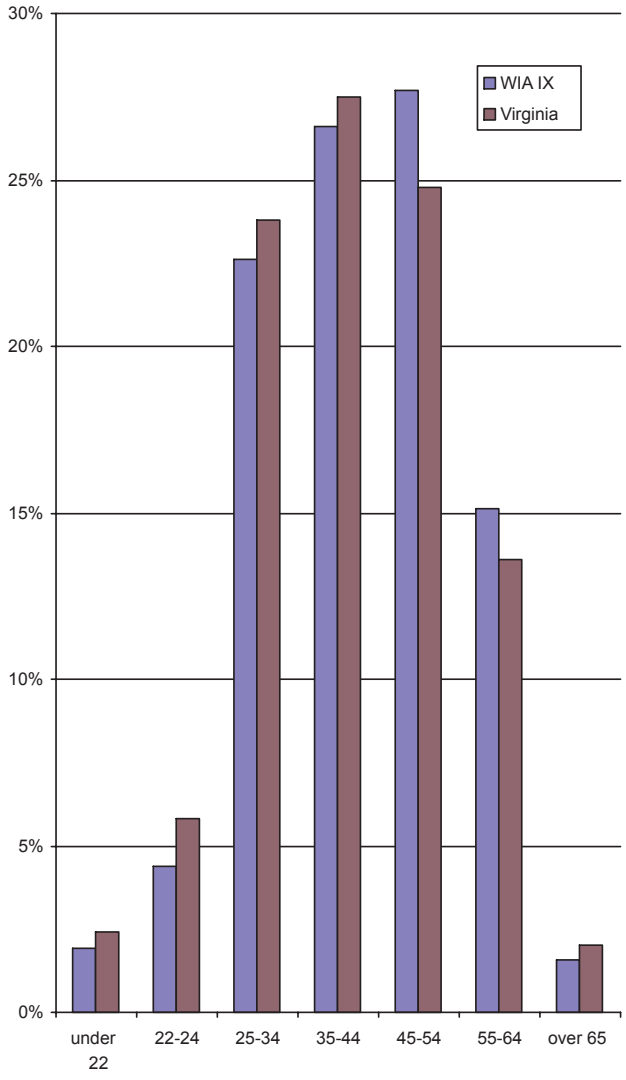
Characteristics of the Unemployed

Office and Administrative Support workers comprise the largest category of unemployed beneficiaries in Capital Area, accounting for almost 19% of total claimants in February 2004. Management and Sales and Related workers also account for a significant share of the unemployed claimants, collectively representing over 22% of the total. Employers requiring workers in these occupation categories will find an abundant supply.

Claimants by Occupation

OCCUPATION	Number of Claimants
Management	1,424
Business and Financial Operations	654
Computer and Mathematical	817
Architecture and Engineering	205
Life, Physical, and Social Science	96
Community and Social Services	76
Legal	132
Education, Training, and Library	200
Arts, Design, Entertainment, Sports, and Media	168
Healthcare Practitioners and Technical	149
Healthcare Support	191
Protective Service	83
Food Preparation and Serving Related	344
Building and Grounds Cleaning and Maintenance	245
Personal Care and Service	90
Sales and Related	1,278
Office and Administrative Support	2,220
Farming, Fishing, and Forestry	15
Construction and Extraction	1,261
Installation, Maintenance, and Repair	492
Production	1,089
Transportation and Material Moving	906
Military Specific	4
SOC INA	
TOTAL	**12,139**

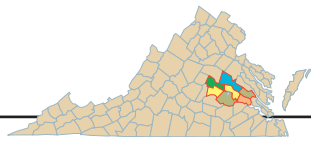
Claimants by Age



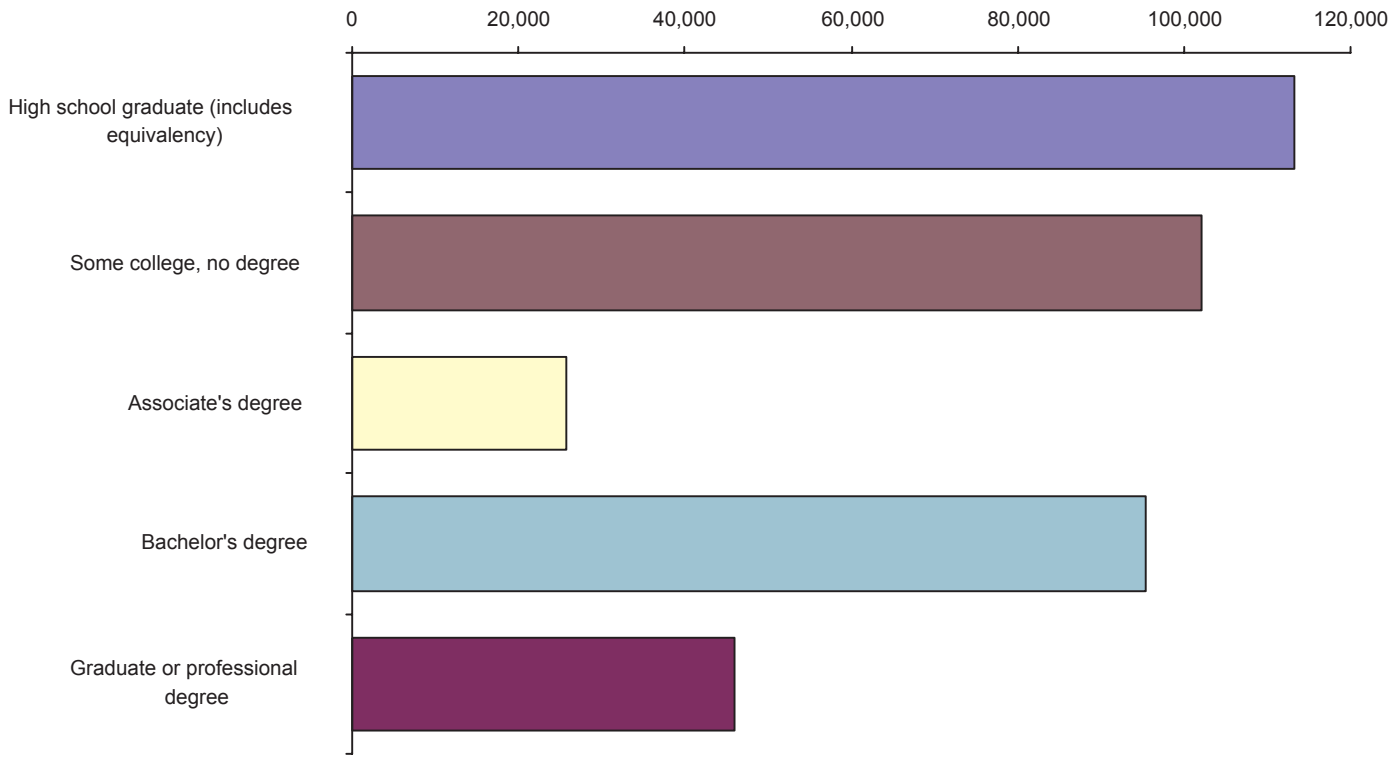
IV. Education Profile

Education data describe the human capital embodied in the current labor force and provide insight into the education and training that will be required to fill the ranks of the future labor force. Some key features of the WIA IX's education and training environment are as follows:

- Educational attainment at the baccalaureate level and above is above the statewide average.
- An assessment of the occupation-driven demand for local training needs indicates that between 1998 and 2008 the greatest demand for graduates from:
  - *Post-secondary vocational programs* will be in Administrative Assistant and Secretarial Science, Auto Mechanic/Technician, Computer Systems Installer and Repairer, Cosmetologist, and Licensed Practical Nursing.
  - *Associate's degree programs* will be in Information Sciences and Systems, Management Information Systems and Business Data Processing, Paralegal, and Registered Nursing.
  - *Baccalaureate degree program*s will be in Accounting; Child Care and Guidance Workers/Managers; Computer and Information Sciences; Electrical, Electronics, and Computer Engineering; Elementary Teacher Education; General Education; General Finance; Human Resources Management; Information Sciences and Systems; Insurance Marketing; Investments and Securities; Management Information Systems and Business Data Processing; Physical Education and Coaching; and Purchasing, Procurement, and Contracts Management.
- An assessment of the occupation-driven demand for worker skills indicates that between 1998 and 2008 there will be a slight increase in required *writing* skills.



Education Level



Population 25 years and over	442,909
High school graduate (includes equivalency)	113,284
Some college, no degree	102,149
Associate's degree	25,698
Bachelor's degree	95,320
Graduate or professional degree	45,983

Source: 2000 Census.

Occupation-Driven Training Projection

In this section we use Virginia Employment Commission's (VEC's) occupational employment projections for the Richmond-Petersburg Metropolitan Statistical Area (MSA),[1] in combination with a crosswalk developed by the National Crosswalk Service Center (NCSC) to "map" occupations into their prerequisite education and training programs.[2] Often these are many-to-many relationships where one occupation maps into several alternative education and training programs, and one program serves as a conduit into multiple occupations. The analysis is then further refined by using a classification scheme developed by the Bureau of Labor Statistics (BLS) to "sort" occupations according to the minimum degree or award typically required for employment in that occupation.[3] Through this combination of steps, we are able to use VEC's occupational employment projections to predict the occupation-driven demand for specific education and training programs within the Richmond-Petersburg MSA.[4] The method used to accomplish this task is not new and has been successfully employed in earlier studies conducted in several states, including Virginia.[5]

The table that follows depicts the annual occupation-driven demand for training needs in the Richmond-Petersburg MSA for the 1998 to 2008 period, as derived from this analysis. As these data show, the largest numbers of needed graduates are in auto repair (*e.g.*, Auto/Automotive Mechanic / Technician), business (*e.g.*, Accounting; Business Administration and Management; General Finance; Human Resource Management; Insurance Marketing Operations; Investment and Securities; Purchasing, Procurement, and Contracts Management), clerical (*e.g.*, Administrative Assistant/Secretarial Science), computer technology (Business System Networking and Telecommunications, Computer Programming, Computer and Information Sciences, Information Sciences and Systems, Management Information Systems and Data Processing), education (*e.g.*, Elementary Teacher Education, General Education, and Physical Education Teaching and Coaching), engineering (*e.g.*, Civil Engineering, Electrical/Electronic and Communication Engineering, Engineering and Industrial Management), government (*e.g.*, Public Administration), health (*e.g.*, Medicine (MD), Registered Nurse, and Licensed Practical Nurse), law (*e.g.*, Law (LLB, JD) and Paralegal/Legal Assistant), and services (*e.g.*, Cosmetologist).

[1] The Richmond-Petersburg Metropolitan Statistical Area is comprised of Charles City, Chesterfield, Dinwiddie, Goochland, Hanover, Henrico, New Kent, Powhatan, and Prince Georgr counties and the cities of Colonial Heights, Hopewell, Petersburg, and Richmond.

[2] The National Crosswalk Service Center (NCSC) is funded by the U.S. Department of Labor, Employment and Training Administration. This crosswalk identifies the prerequisite instructional programs necessary for employment in 651 specific occupations.

[3] The Bureau of Labor Statistics classifies occupations according to eleven education and training categories. Four of these involve on-the-job training or work experience only and the remaining seven require some level of postsecondary education (i.e., first-professional degree, doctoral degree, master's degree, bachelor's degree, associate's degree, or postsecondary vocational training). For purposes of this study, we restrict the analysis to occupations that fall within these seven education and training categories.

[4] More formally, the demand for education and training programs is calculated as:

$DCIPi = \sum Dcipji$

Where,

$Dcipji = (SOCj)(GCIPi/\sum Gcipij)$

and,

DCIPi = the annual demand for instructional program i

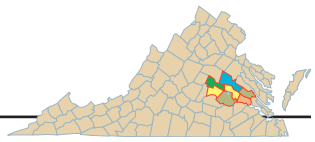
$\sum Dcipji$ = the annual demand for instructional program i across all occupation(s) j

SOCj = the projected annual openings for occupation j

GCIPi = Virginia graduates from instructional program i (for academic year 2000-01)

$\sum Gcipij$ = Virginia graduates from all instructional program(s) i (for academic year 2000-01) related to occupation j

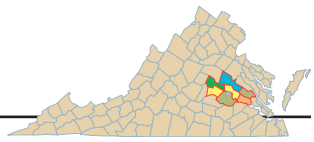
[5] Similar methods are used in at least seven states (California, Georgia, Idaho, Illinois, New Jersey, Utah, and Virginia) to project anticipated education and training demands. For an excellent exposition of this method see, William J. Drummond and Jan L Youtie, "Occupational Employment, Demand for College Graduates, and Migration: A Statewide View," a report to the Board of Regents, University System of Georgia, 1999. For an example of how this method has been used previously in Virginia see, A. Fletcher Mangum, "System-Wide Needs Assessment for Virginia Education," State Council of Higher Education for Virginia, March 28, 2002, p.90.



Annual Occupation-Driven Training Needs in the Richmond-Petersburg MSA, 1998 – 2008

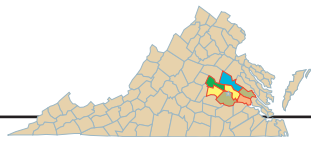
Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Accounting					120			120
Actuarial Science					2			2
Adaptive Physical Education/ Therapeutic Recreation					1			1
Administrative Assistant / Secretarial Science, General							50	50
Advertising				1				1
Aeronautical and Aerospace Engineering Tech/Technician						1		1
Aerospace, Aeronautical and Astronautical Engineering					3			3
Agricultural Animal Husbandry and Production Management					1			1
Agricultural Business and Management, General				1				1
Agricultural Economics					1			1
Agricultural Supplies Retailing and Wholesaling					1			1
Agricultural Teacher Education (Vocational)					3			3
Animal Sciences, General				1				1
Applied Mathematics, General			2					2
Architectural Engineering					2			2
Architectural Environmental Design					3			3
Architectural Urban Design and Planning			1					1
Architecture					16			16
Art History, Criticism and Conservation			3					3
Art Teacher Education					13			13
Art, General				8				8
Arts Management				8				8
Audiology/Hearing Sciences			1					1

Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Auto / Automotive Mechanic / Technician							109	109
Automotive Engineering Tech / Technician							6	6
Barber/Hairstylist							6	6
Basic Medical Sciences, Other		1						1
Bible/Biblical Studies					1			1
Bilingual/Bicultural Education					7			7
Biochemistry		1						1
Biology Teacher Education					2			2
Biology, General		8						8
Business Administration and Management, General				776	11			787
Business Computer Programming / Programmer					20			20
Business Information and Data Processing Services, Other					3			3
Business Machine Repairer							1	1
Business Marketing and Marketing Management				10				10
Business Quantitative Methods and Management Science, Other			3					3
Business Services Marketing Operations					1			1
Business Systems Analysis and Design					8			8
Business Systems Networking and Telecommunications					5	43		48
Business Teacher Education (Vocational)					3			3
Business / Managerial Economics					4			4
Cardiovascular Tech / Technician						9		9
Cartography					2			2
Chemical Engineering					11			11
Chemistry, General					18			18
Child Care and Guidance Workers and Managers, General					59			59



Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Child Care Provider / Assistant					23			23
Child Care Services Manager					6			6
Chiropractic (DC, DCM)	2							2
City/Urban, Community and Regional Planning			17					17
Civil Engineering, General					46			46
Civil Engineering, other					1			1
Clinical Psychology			1					1
College/Postsecondary Student Counseling and Personnel			1					1
Commercial Photography							1	1
Communication Disorders, General			5					5
Communication Systems Installer and Repairer							22	22
Communications Technol. / Technicians, Other							2	2
Community Organization, Resources and Services				3				3
Computer and Information Sciences, General					189			189
Computer and Information Sciences, Other					10			10
Computer Engineering					33			33
Computer Engineering Tech / Technician						10		10
Computer Installer and Repairer							6	6
Computer Maintenance Tech/ Technician							17	17
Computer Programming					46			46
Computer Science					3			3
Computer System Analysis					10			10
Computer Teacher Education					4			4
Conservation and Renewable Natural Resources, Other					1			1
Cosmetic Services, General							4	4
Cosmetologist							59	59

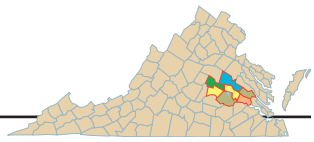
Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Counseling Psychology			1					1
Counselor Education Counseling and Guidance Services			29					29
Court Reporter							2	2
Dance							1	1
Data Processing Tech / Technician					3			3
Dental Clinical Services / Graduate Dentistry (MS, PhD)	1							1
Dental Hygienist						32		32
Dentistry (DDS, DMD)	12							12
Design and Applied Arts, Other					4			4
Design and Visual Communications					13			13
Dietetics / Human Nutritional Services					3			3
Divinity/Ministry (B.D., M.Div.)	1							1
Drama and Dance Teacher Education					1			1
Earth and Planetary Sciences					1			1
Economics, General					24			24
Education Administration and Supervision, General				19				19
Education Administration and Supervision, Other				2				2
Education of the Deaf and Hearing Impaired					1			1
Education of the Emotionally Handicapped					1			1
Education of the Mentally Handicapped					1			1
Education of the Specific Learning Disabled					1			1
Education of the Speech Impaired					1			1
Education, General				38	248			286
Educational Supervision				1				1
Electrical and Electronic Engineering – Related Tech / Technician						12		12



Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Electrical and Electronics Equipment Installer and Repairer							10	10
Electrical, Electronic and Communications Engineering Tech / Technician						17		17
Electrical, Electronics and Communication Engineering					59			59
Electromechanical Tech / Technician						2		2
Elementary Teacher Education					133			133
Elementary, Middle and Secondary Education Administration				4				4
Emergency Medical Tech / Technician							20	20
Engineering / Industrial Management				78	1			79
English Teacher Education					18			18
Enterprise Management and Operation, General				7				7
Farm and Ranch Management				1				1
Fashion and Fabric Consultant					1			1
Fashion Design and Illustration					6			6
Fashion Merchandising				1				1
Film/Video and Photographic Arts, Other							1	1
Finance, General				102	135			237
Financial Management and Services, Other				2				2
Financial Planning					20			20
Financial Services Marketing Operations					7			7
Fine Arts and Art Studies, Other				1				1
Fine/Studio Arts				4				4
Floristry Marketing Operations					2			2
Food and Nutrition Science					2			2
Foods and Nutrition Studies, General					5			5

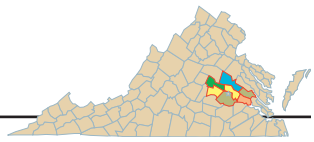
Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Foreign Languages Teacher Education					3			3
Forestry, General					2			2
Funeral Services and Mortuary Science						4		4
General Buying Operations					7			7
General Retailing Operations					12			12
Geological and Related Sciences, Other					1			1
Geology					4			4
Graphic Design, Commercial Art and Illustration				11				11
Health and Medical Administrative Services, Other				1				1
Health and Physical Education, General					7			7
Health and Physical Education/Fitness, Other					1			1
Health System/Health Services Administration				1				1
Health Teacher Education					9			9
Higher Education Administration				1				1
History Teacher Education					2			2
Home Economics Teacher Education (Vocational)					1			1
Home Furnishings and Equipment Installers and Consultants, General					1			1
Human Resources Management				18	97			115
Human Resources Management, Other					10			10
Industrial Design					3			3
Industrial Electronics Installer and Repairer							1	1
Industrial/Manufacturing Engineering					5			5
Information Sciences and Systems					102	55		157

Education Profile



Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Instrumentation Tech / Technician						1		1
Insurance and Risk Management					16			16
Insurance Marketing Operations					62			62
Interior Architecture					2			2
Interior Design					6			6
International Business				21				21
Investments and Securities				3	60			63
Junior High / Intermediate / Middle School Teacher Education					8			8
Juridical Science / Legal Specialization (LLM, MCL, JSD)	5							5
Labor/Personnel Relations and Studies				4	13			17
Landscape Architecture					1			1
Law (LLB, JD)	84							84
Law and Legal Studies, Other	6							6
Legal Administrative Assistant / Secretary							4	4
Library Science, Other			1					1
Library Science / Librarianship			27					27
Logistics and Materials Management				1				1
Make-Up Artist							4	4
Management Information Systems and Business Data Processing					84	86		170
Management Science			8					8
Material Engineering					1			1
Mathematics			3					3
Mathematics Teacher Education					13			13
Mechanical Engineering					32			32
Medical Administrative Assistant / Secretary							6	6
Medical Office Management							2	2
Medical Pharmacology and Pharmaceutical Sciences	2							2

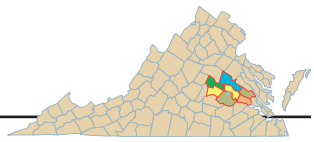
Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Medical Records Tech / Technician						17		17
Medical Transcription							13	13
Medicine (MD)	87							87
Metal and Jewelry Arts				2				2
Microbiology/ Bacteriology		1						1
Music Teacher Education					23			23
Natural Resources Conservation, General					3			3
Natural Resources Management and Policy					1			1
Natural Resources Management and Protective Services, Other					1			1
Nuclear Engineering					1			1
Nuclear Medical Tech / Technician						1		1
Nursing (R.N. Training)						275		275
Nursing Anesthetics (Post-R.N.)						2		2
Nursing Science (Post-R.N.)						13		13
Nursing, Adult Health (Post-R.N.)						1		1
Nursing, Family Practice (Post-R.N.)						4		4
Nursing, Maternal/Child Health (Post-R.N.)						1		1
Nursing, Other						41		41
Nursing, Public Health (Post-R.N.)						1		1
Nursing, Surgical (Post-R.N.)						1		1
Occupational Therapy					12			12
Occupational Therapy Assistant						5		5
Oceanography					1			1
Operations Research			1					1
Optometry (O.D.)	2							2
Organizational Behavior Studies					25			25
Osteopathic Medicine (D.O.)	14							14
Painting				1				1
Paralegal/Legal Assistant						59		59



Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Parks, Recreation and Leisure Facilities Management					3			3
Parks, Recreation and Leisure Studies					3			3
Parks, Recreation, Leisure and Fitness Studies, other					1			1
Pharmacy (B. Pharm., Pharm D.)	24							24
Pharmacy, other	1							1
Photography							3	3
Physical Education Teaching and Coaching					51			51
Physical Therapy			25					25
Physical Therapy Assistant						16		16
Physician Assistant					20			20
Physics, General		1						1
Practical Nurse (LPN Training)							142	142
Psychiatric / Mental Health Services Technician							5	5
Psychology, General			10					10
Psychology, Other			1					1
Public Administration				52				52
Public Administration and Services, Other				2				2
Public Health, General				1				1
Public Policy Analysis				1				1
Public Relations and Organizational Communications				1	24			25
Purchasing, Procurement and Contracts Management					53			53
Radio and Television Broadcasting Tech / Technician							2	2
Reading Teacher Education					30			30
Real Estate					33		18	51
Recreational Therapy					1			1
Religious Education					1			1
Respiratory Therapy Technician						19		19

Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Robotics Tech / Technician						1		1
School Psychology			3					3
Science Teacher Education, General					6			6
Secondary Teacher Education					33			33
Social Science Teacher Education					3			3
Social Studies Teacher Education					8			8
Spanish Language Teacher Education					2			2
Special Education, General					23			23
Special Education, Other					2			2
Speech-Language Pathology			4					4
Speech-Language Pathology and Audiology			11					11
Sport and Fitness Administration/ Management					3			3
Surgical / Operating Room Technician							10	10
Surveying					5			5
Taxation					7			7
Teacher Education, Specific Academic and Vocational Programs					14			14
Technical Teacher Education (Vocational)					4			4
Technical Theater/Theater Design and Stagecraft					1			1
Technology Teacher Education / Industrial Arts Teacher Ed					5			5
Theology/Theological Studies	1							1
Trade and Industrial Teacher Education (Vocational)					5			5
Travel Services Marketing Operations							18	18
Veterinarian Assistant / Animal Health Technician						5		5
Veterinary Clinical Sciences (MS, PhD)	1							1

Education Profile



Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Veterinary Medicine (DVM)	7							7
Vocational Rehabilitation Counseling			2					2
Totals	250	12	160	1189	2357	734	545	**5247**

Work Skills Projection

In this section we use the VEC's occupational employment projections for the Richmond MSA, in combination with occupational skills profiles developed by ACT,[1] to identify the skill sets that will be required to fill projected annual job openings within the region. The skills categories addressed in this analysis are Applied Mathematics, Applied Technology, Listening, Locating Information, Observation, Reading for Information, Teamwork, and Writing. A description of each category, the skills levels associated with it, and the proportion of projected annual job openings that fall within each skill level follow.

Applied Mathematics

The *Applied Mathematics* assessment measures a person's skill in using mathematical reasoning to solve work-related problems. ACT defines the skills levels associated with this category as follows.

Level 3:

- Perform basic mathematical operations using whole numbers and decimals.
- Convert a number from one form into another using whole numbers, fractions, decimals, or percentages.
- Solve problems that are straightforward, involving a single type of mathematical operation.
- Translate easily from a verbal setup to a mathematical equation when all the information needed to solve the problem is provided in logical order and no unrelated information is included.

Level 4 (in addition to requirements for previous levels):

- Perform one or two mathematical operations using several positive or negative numbers.
- Add commonly known fractions, decimals, or percentages, or add three fractions that share a common denominator.
- Calculate averages, simple ratios, proportions, and rates, using whole numbers and decimals.
- Reorder verbal information before performing calculations.
- Determine which operations to perform and in what order.
- Read a simple chart or graph to obtain the information needed to solve a problem.

Level 5 (in addition to requirements for previous levels):

- Look up and calculate single-step conversions within English or non-English systems of measurement or between systems of measurement.
- Calculate using mixed units and several steps of logic.
- Calculate perimeters and areas of basic shapes.
- Calculate percentage discounts and markups.
- Determine what information, calculations, and unit conversions are needed to find a solution.

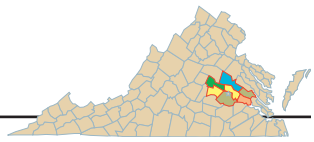
Level 6 (in addition to requirements for previous levels):

- Calculate using negative numbers, fractions, ratios, percentages, and mixed numbers.
- Calculate multiple rates for comparison or use in other calculations.
- Find basic areas and volumes of rectangular solids.
- Identify and correct errors in calculations.
- Solve problems involving considerable setup and multiple-step calculations or conversions.

Level 7 (in addition to requirements for previous levels):

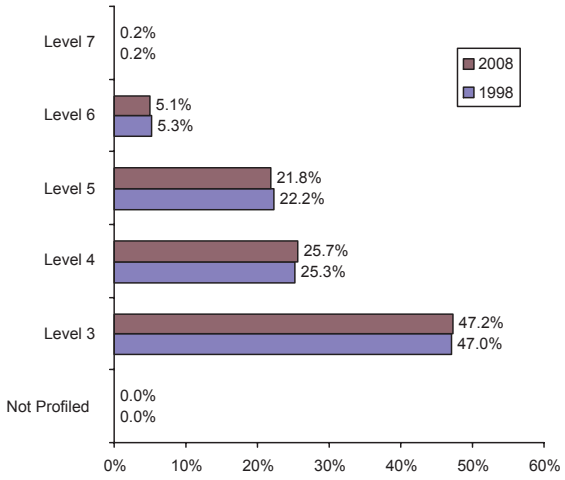
- Calculate using multiple steps of logic.
- Calculate multiple areas and the volumes of spheres, cylinders, and cones.
- Solve problems with more than one unknown.
- Solve problems involving nonlinear functions, such as rates of change.

[1] The occupational skills profiles used in this analysis were provided by ACT. ACT is an independent, non-profit organization that specializes in research and assessment related to education and work. These profiles are based on actual ACT *WorkKeys* assessments of thousands of employed individuals nationally. They represent the most comprehensive and current measure of the work skills required for specific occupations.

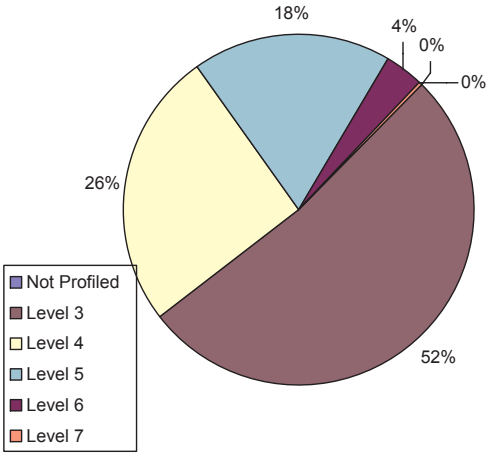


- Calculate by applying basic statistical concepts.
- Derive information needed to solve problems if incomplete or implicit information is presented.

The following figure details the percentage of overall jobs in the Richmond MSA in 1998 and 2008 by required *Applied Mathematics* skills level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 3 *Applied Mathematics* skills.



Proportion of Jobs in the Richmond MSA by Required Skill Level – Applied Mathematics



Annual Openings in the Richmond MSA by Required Skill Level – Applied Mathematics

Applied Technology

The *Applied Technology* assessment measures a person's skill in using the basic principles of mechanics, electricity, fluid dynamics, and thermodynamics to solve problems with machines, equipment, and structures found in the workplace. ACT defines the skills levels associated with this category as follows.

Level 3:

- Understand the operation of basic hand tools, simple machine components, and uncomplicated systems, such as piping systems, simple electrical heaters, or other equipment found in the home, school, or workplace.
- Apply elementary principles underlying the operation of physical systems, such as the workings of plumbing components or simple electrical systems.

Level 4 (in addition to requirements for previous levels):

- Understand the operation of moderately complex tools, machines, and systems, such as appliances, pulley-driven equipment, or piping systems that carry more than one fluid.
- Apply elementary principles underlying the operation of physical systems, such as a block and tackle or cooling fins.

Level 5 (in addition to requirements for previous levels):

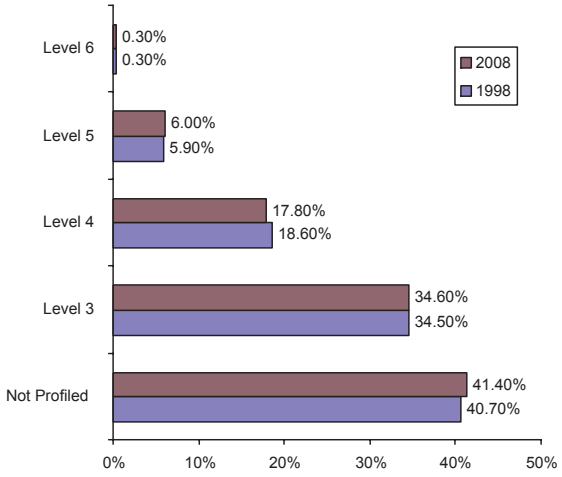
- Use the basic principles of mechanics, electricity, thermodynamics, and fluid dynamics in moderate and advanced applications.
- Understand complex machines and systems, such as the operation of gasoline engines, complex appliances, or an electrical system in a building.

Level 6 (in addition to requirements for previous levels):

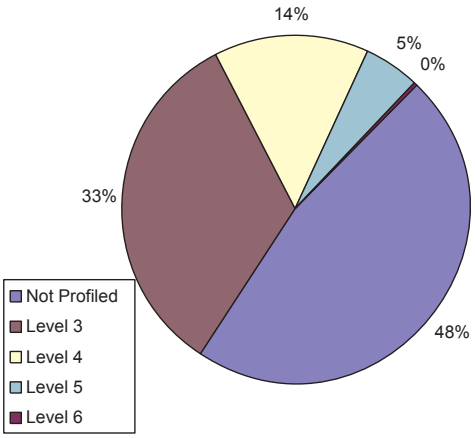
- Use principles of mechanics, electricity, thermodynamics, and fluid dynamics interacting in advanced applications such as air conditioning units.
- Troubleshoot complex systems in which a variety of mechanical, electrical, thermal, or flow faults are potential sources of difficult problems.

The following figure details the percentage of overall jobs in the Richmond MSA in 1998 and 2008 by required *Applied Technology* skills level, as determined by the ACT occupation skills profiles. The second figure provides a

similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 3 *Applied Technology* skills. The large "Not Profiled" proportion indicates that ACT has not profiled many of these occupations with respect to *Applied Technology* skills. As a result, it is not possible to include them in the analysis.



Proportion of Jobs in the Richmond MSA by Required Skill Level – Applied Technology



Annual Openings in the Richmond MSA by Required Skill Level – Applied Technology

Listening

The *Listening* portion of the *Listening* and *Writing* assessment measures a person's skill in listening to and conveying information. ACT defines the skills levels associated with this category as follows.

Level 1:

- Write down a small amount of useful information based on a spoken communication.
- Give clues to the gist of the situation or provide sources of further information, but do not include enough information to give the receiver a correct understanding of the situation described in the message.

Level 2 (in addition to requirements for previous levels):

- Correctly write down the basic ideas of a spoken message.
- Give a fair amount of useful information, but may miss some of the important details or incorrectly record some of the information.

Level 3 (in addition to requirements for previous levels):

- Listen to a spoken communication and record messages that are basically correct.
- Present all the primary details and the relationships among them correctly, but may miss one or two pieces of important information.

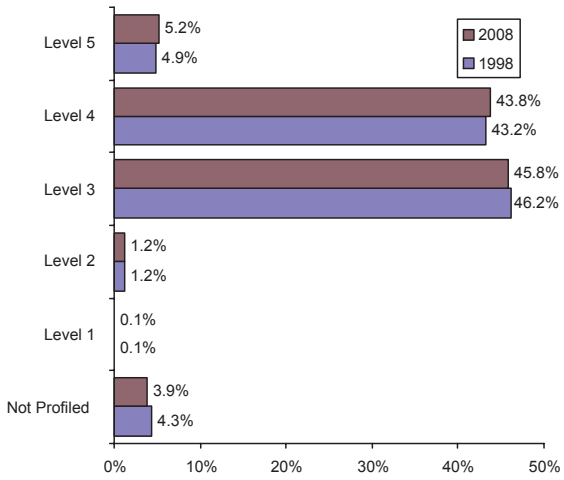
Level 4 (in addition to requirements for previous levels):

- Accurately convey the central idea of a spoken communication.
- Correctly record all the important information and the relationships among pieces of information, but may miss or incorrectly record some details or include irrelevant information.

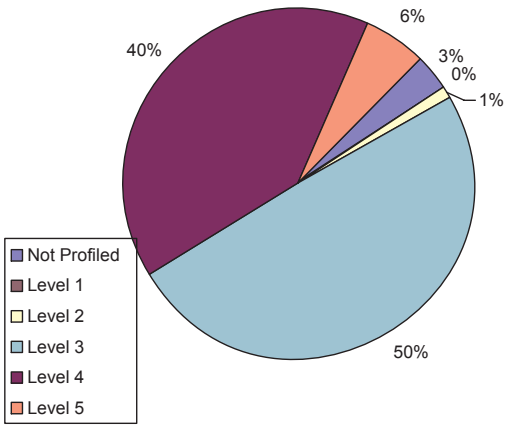
Level 5 (in addition to requirements for previous levels):

- Correctly record all the important information and the relationships among pieces of information from a spoken communication.
- Use supporting details to convey insight into the particular situation the message involves.

The following figure details the percentage of overall jobs in the Richmond MSA in 1998 and 2008 by required *Listening* skills level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 3 and Level 4 *Listening* skills.



Proportion of Jobs in the Richmond MSA by Required Skill Level – Listening



Annual Openings in the Richmond MSA by Required Skill Level – Listening

Locating Information

The *Locating Information* assessment measures a person's skill in using workplace graphics such as diagrams, floor plans, tables, charts, graphs, forms, and instrument gauges. ACT defines the skills levels associated with this category as follows.

Level 3:

- Find one or two pieces of information in a graphic.
- Fill in one or two pieces of information that are missing from a graphic.

Level 4 (in addition to requirements for previous levels):

- Find several pieces of information in graphics.
- Summarize and/or compare information and trends in a single graphic.
- Summarize and/or compare information and trends among more than one graphic by determining the relationships among the graphics.

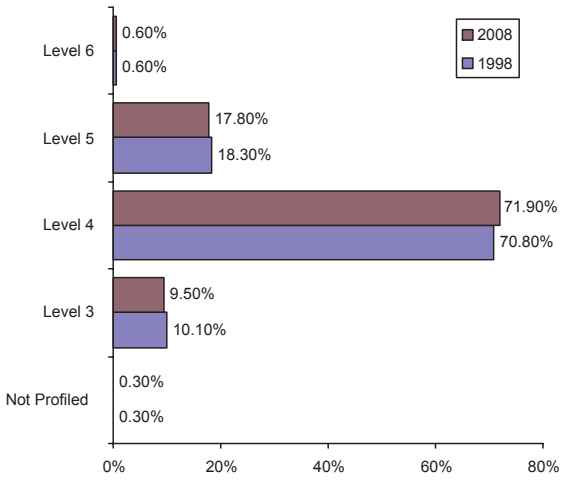
Level 5 (in addition to requirements for previous levels):

- Summarize and/or compare information and trends in a single graphic.
- Sort through distracting information to summarize and/or compare information and trends presented in more than one workplace graphic.

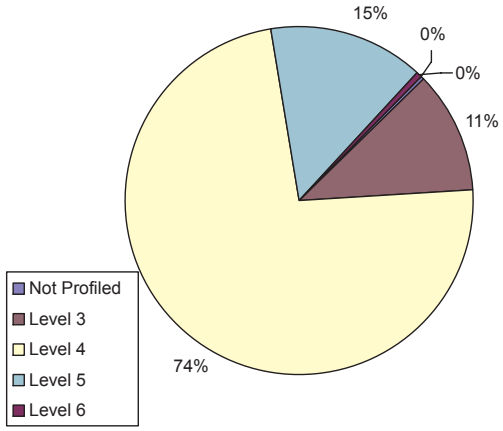
Level 6 (in addition to requirements for previous levels):

- Draw conclusions from the information presented in very detailed graphics.
- Apply information from these types of graphics to specific situations.
- Analyze data within these types of graphics to make decisions and/or predictions requiring judgments based on the information presented.

The following figure details the percentage of overall jobs in the Richmond MSA in 1998 and 2008 by required *Locating Information* skills level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the vast majority of jobs will require workers with Level 4 *Locating Information* skills.



Proportion of Jobs in the Richmond MSA by Required Skill Level – Locating Information



Annual Openings in the Richmond MSA by Required Skill Level – Locating Information

Observation

The *Observation* assessment measures a person's skill at noticing details and paying attention to instructions and demonstrations. The following is a description of the skills levels associated with this area.

Level 3:

- Pay attention.
- Watch and listen to a strongly cued demonstration or set of instructions.
- Recall a few strongly reinforced details of a process or procedure.

Level 4:

- Sustain focused attention on the demonstrated instructions, process, or procedures.
- Select and attend to important details.
- Recall a few important, moderately reinforced details about the demonstrated process or procedure.

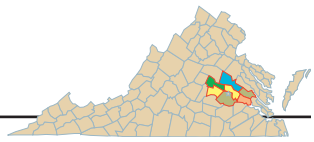
Level 5:

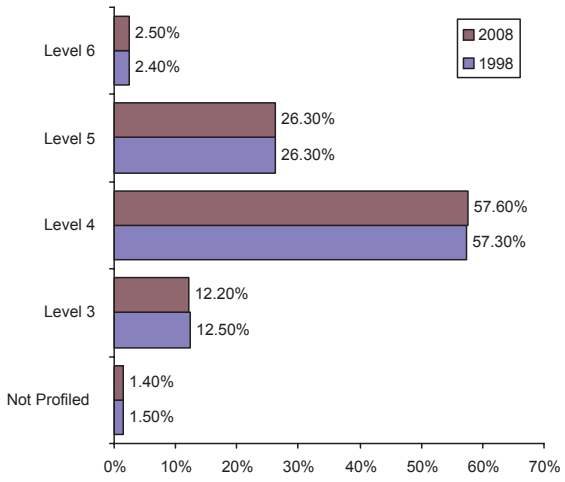
- Focus attention on and recall several important aspects of the information presented.
- Ignore irrelevant background information through selective attention to important details.
- Maintain attention to detail.
- Recall several important details about unfamiliar material.

Level 6:

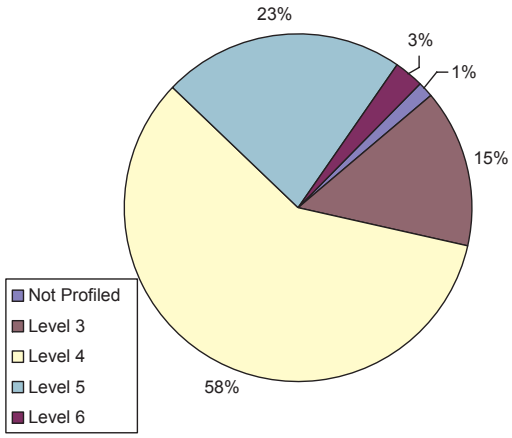
- Notice and remember several details that are relevant to the process or procedure being shown.
- Take in and recall incoming sensory information so it can be used to make predictions, comparisons, or evaluations.
- Visualize how a detail or task fits into the entire process or procedure demonstrated.
- Interpret if-then and cause-effect relationships.

The following figure details the percentage of overall jobs in the Richmond MSA in 1998 and 2008 by required *Observation* skills level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 4 *Observation* skills.





Proportion of Jobs in the Richmond MSA by Required Skill Level – Observation



Annual Openings in the Richmond MSA by Required Skill Level – Observation

Reading for Information

The *Reading for Information* assessment measures a person's skill in reading and using work-related information including instructions, policies, memos, bulletins, notices, letters, manuals, and governmental regulations. ACT defines the skills levels associated with this category as follows.

Level 3:

- Identify uncomplicated key concepts and simple details.
- Recognize the proper placement of a step in a sequence of events, or the proper time to perform a task.
- Identify the meaning of a word that is defined within the document.
- Identify the meaning of a simple word that is not defined within the document.
- Recognize the application of instructions given in the document to situations that are also described in the document.

Level 4:

- Identify important details that are less obvious than those in Level 3.
- Recognize the application of more complex instructions, some of which involve several steps, to described situations.
- Recognize cause-effect relationships.
- Determine the meaning of words that are not defined in the document.

Level 5:

- Identify the paraphrased definition of a technical term or jargon that is defined in the document.
- Recognize the application of technical terms or jargon to stated situations.
- Recognize the definition of an acronym that is defined in the document.
- Identify the appropriate definition of a word with multiple meanings.
- Recognize the application of instructions from the document to new situations that are similar to those described in the document.
- Recognize the application of more complex instructions to described situations, including conditionals and procedures with multiple steps.

Level 6:

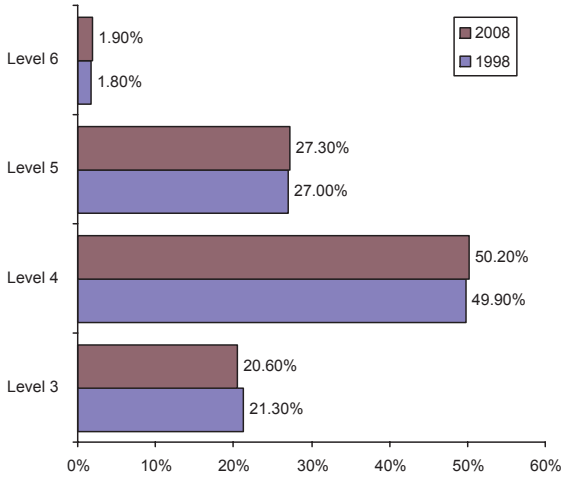
- Recognize the application of jargon or technical terms to new situations.
- Recognize the application of complex instructions to new situations.
- Recognize, from context, the less common meaning of a word with multiple meanings.
- Generalize from the document situations not described in the document.
- Identify implied details.

- Explain the rationale behind a procedure, policy, or communication.
- Generalize from the document to a somewhat similar situation.

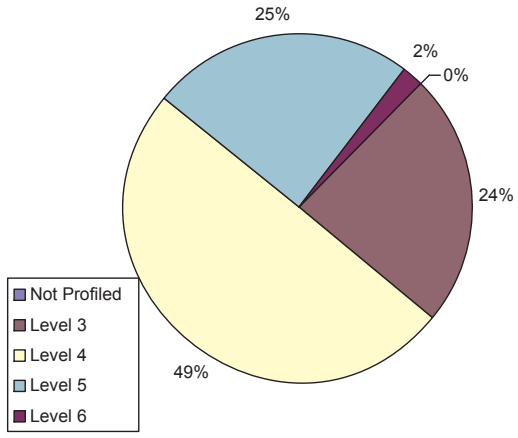
Level 7:

- Recognize the definitions of difficult, uncommon jargon or technical terms, based on the context of the reading materials.
- Figure out the general principles underlying described situations and apply them to situations neither described in nor completely similar to those in the document.

The following figure details the percentage of overall jobs in the Richmond MSA in 1998 and 2008 by required *Reading for Information* skills level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 4 *Reading for Information* skills.



Proportion of Jobs in the Richmond MSA by Required Skill Level – Reading for Information



Annual Openings in the Richmond MSA by Required Skill Level – Reading for Information

Teamwork

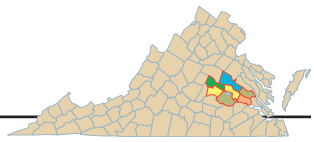
The *Teamwork* assessment measures a person's skill in choosing behaviors and/or actions that simultaneously support relationships within a team and lead toward the accomplishment of work tasks. The following is a description of the skills levels associated with this area.

Level 3:

- Identify team goals and ways to work with other team members to accomplish team goals.
- Recognize that a team is having problems finishing a task and identify the cause of those problems.
- Choose actions that actively support the ideas other team members have for accomplishing team goals.
- Recognize the need for trust and dependability in a team environment.

Level 4:

- Identify the organization of tasks and the time schedule that would help the team reach goals efficiently, creatively, and effectively.
- Select approaches that accept direction from other team members in order to complete tasks and to build and keep up good team relations.
- Identify behaviors that show appreciation for the personal and professional qualities of other team members and respect for their diversity.
- Recognize the need for commitment to quality and sensitivity to customers while pursuing the team goal.



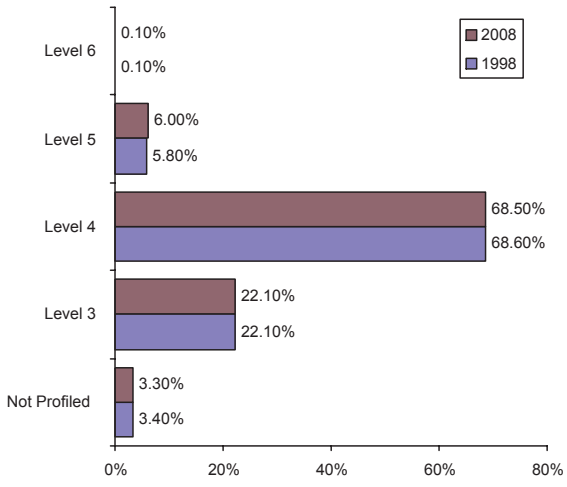
Level 5:

- Identify courses of action that give direction to other team members.
- Determine the best use of team talents to accomplish goals.
- Choose approaches that encourage other team members to improve relationships and/or complete tasks.
- Consider and evaluate the possible effects of alternative behaviors on both team relationships and the completion of tasks.

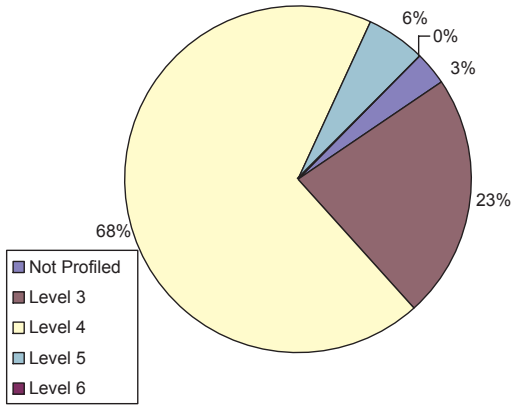
Level 6:

- Identify the focus of team activity and select a new focus if that would help the team meet its goals more effectively.
- Select approaches that show a willingness to give and take direction, as needed, to further team goals (e.g., recognize the organization of team members' tasks that would best serve the larger goals of the team).
- Choose approaches that encourage a team to act as a unit and reach agreement when discussing specific issues.
- Identify actions that would help manage differences of opinion between team members, moving the team toward its goals while valuing and supporting individual diversity.

The following figure details the percentage of overall jobs in the Richmond MSA in 1998 and 2008 by required *Teamwork* skills level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 4 *Teamwork* skills.



Proportion of Jobs in the Richmond MSA by Required Skill Level – Teamwork



Annual Openings in the Richmond MSA by Required Skill Level – Teamwork

Writing

The *Writing* portion of the *Listening* and *Writing* assessment measures a person's skill in writing work-related messages. ACT defines the skills levels associated with this category as follows.

Level 1:

- Write messages in English that contain a large number of major grammatical, punctuation, spelling, and/or other mechanical errors making the messages very unclear and inconsistent with standard business English.

Level 2:

- Write messages that are generally understandable, but contain many errors in grammar, punctuation, and/or sentence structure making these messages somewhat difficult to comprehend.

Level 3:

- Write messages that are clear, but may include some incomplete sentences and/or errors in grammar and punctuation.

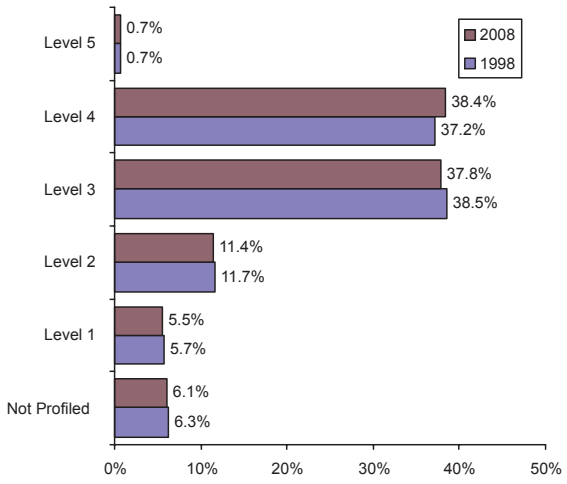
Level 4:

- Write messages that are clear and generally consistent with standard business English, but may contain a few minor errors in grammar and punctuation, and/or the writing style may lack clear organization and appropriate transitions.

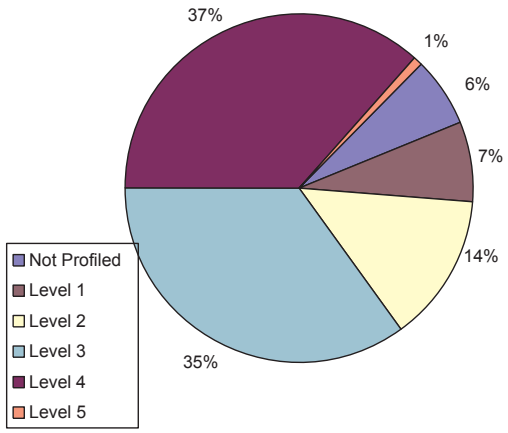
Level 5:

- Write messages that are clear and highly consistent with standard business English.
- Use good sentence structure with a smooth, logical style and no mechanical errors.

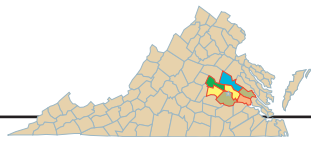
The following figure details the percentage of overall jobs in the Richmond MSA in 1998 and 2008 by required *Writing* skills level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 3 and Level 4 *Writing* skills.



Proportion of Jobs in the Richmond MSA by Required Skill Level – Writing



Annual Openings in the Richmond MSA by Required Skill Level – Writing



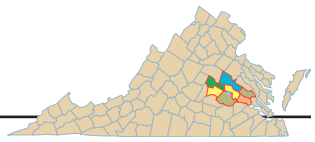
Graduate Data

As a compliment to the prior two sections which detailed the likely demand for skilled workers in the region, this section provides data on the current supply of graduates within WIA IX. These data reflect number of graduates, by institution, and by academic program for the 2002-2003 academic year.[1]

Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
J. Sargeant Reynolds CC	Agricultural Business and Management, General (01.0101)	0	0	8	0	0	0	0
J. Sargeant Reynolds CC	Radio and Television Broadcasting Tech./Technician (10.0104)	0	7	0	0	0	0	0
J. Sargeant Reynolds CC	Special Education, Other (13.1099)	0	9	14	0	0	0	0
J. Sargeant Reynolds CC	Engineering, General (14.0101)	0	0	8	0	0	0	0
J. Sargeant Reynolds CC	Civil Engineering/Civil Tech./Technician (15.0201)	0	1	0	0	0	0	0
J. Sargeant Reynolds CC	Electrical and Electronic Engin.-Related Technol./Technicians, Other (15.0399)	0	0	6	0	0	0	0
J. Sargeant Reynolds CC	Engineering-Related Technol./Technicians, Other (15.9999)	0	0	4	0	0	0	0
J. Sargeant Reynolds CC	Liberal Arts and Sciences/Liberal Studies (24.0101)	0	0	25	0	0	0	0
J. Sargeant Reynolds CC	Biological and Physical Sciences (30.0101)	0	0	29	0	0	0	0
J. Sargeant Reynolds CC	Protective Services, Other (43.9999)	0	6	27	0	0	0	0
J. Sargeant Reynolds CC	Public Administration and Services, Other (44.9999)	0	0	12	0	0	0	0
J. Sargeant Reynolds CC	Social Sciences, General (45.0101)	0	0	79	0	0	0	0
J. Sargeant Reynolds CC	Vehicle and Mobile Equipment Mechanics and Repairers, Other (47.0699)	0	8	18	0	0	0	0
J. Sargeant Reynolds CC	Visual and Performing Arts, Other (50.9999)	0	0	2	0	0	0	0
J. Sargeant Reynolds CC	Dental Hygienist (51.0602)	0	7	0	0	0	0	0
J. Sargeant Reynolds CC	Dental Laboratory Technician (51.0603)	0	0	6	0	0	0	0
J. Sargeant Reynolds CC	Mental Health Services, Other (51.1599)	224	0	0	0	0	0	0
J. Sargeant Reynolds CC	Medical Laboratory Technician (51.1004)	0	0	8	0	0	0	0
J. Sargeant Reynolds CC	Occupational Therapy Assistant (51.0803)	0	0	7	0	0	0	0
J. Sargeant Reynolds CC	Respiratory Therapy Technician (51.0908)	0	0	15	0	0	0	0
J. Sargeant Reynolds CC	Nursing (R.N. Training) (51.1601)	0	20	108	0	0	0	0

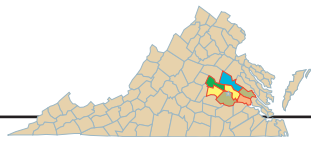
[1] *Source*: State Council of Higher Education for Virginia, Research Report C1, Completion Summary. Where data for 2002-2003 were not available, 2001-2002 data have been used.

Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
J. Sargeant Reynolds CC	Optical Technician/Assistant (51.1802)	0	0	13	0	0	0	0
J. Sargeant Reynolds CC	Business, General (52.0101)	0	3	29	0	0	0	0
J. Sargeant Reynolds CC	Business Administration and Management, General (52.0201)	0	0	78	0	0	0	0
J. Sargeant Reynolds CC	Administrative Assistant/Secretarial Science, General (52.0401)	0	9	24	0	0	0	0
J. Sargeant Reynolds CC	Management Information Systems and Business Data Processing, General (52.1201)	0	0	55	0	0	0	0
John Tyler CC	Funeral Services and Mortuary Science (12.0301)	0	0	22	0	0	0	0
John Tyler CC	Special Education, Other (13.1099)	0	21	21	0	0	0	0
John Tyler CC	Architectural Engineering Tech./Technician (15.0101)	0	9	5	0	0	0	0
John Tyler CC	Electrical and Electronic Engin.-Related Technol./Technicians, Other (15.0399)	0	0	14	0	0	0	0
John Tyler CC	Industrial/Manufacturing Tech./Technician (15.0603)	0	0	2	0	0	0	0
John Tyler CC	Mechanical Engineering-Related Technol./ Technicians, Other (15.0899)	0	1	1	0	0	0	0
John Tyler CC	Liberal Art and Sciences, General Studies and Humanities, Other (24.0199)	0	0	162	0	0	0	0
John Tyler CC	Protective Services, Other (43.9999)	0	0	21	0	0	0	0
John Tyler CC	Graphic and Printing Equipment Operator, General (48.0201)	0	16	0	0	0	0	0
John Tyler CC	Mental Health Services, Other (51.1599)	174	1	25	0	0	0	0
John Tyler CC	Physical Therapy (51.2308)	0	0	10	0	0	0	0
John Tyler CC	Nursing (R.N. Training) (51.1601)	0	0	66	0	0	0	0
John Tyler CC	Management Information Systems and Business Data Processing, General (52.1201)	0	0	27	0	0	0	0
John Tyler CC	Administrative Assistant/Secretarial Science, General (52.0401)	0	3	13	0	0	0	0
John Tyler CC	Business, General (52.0101)	0	0	35	0	0	0	0
Randolph Macon College	Environmental Science/Studies (03.0102)	0	0	0	7	0	0	0
Randolph Macon College	Computer and Information Sciences, General (11.0101)	0	0	0	9	0	0	0
Randolph Macon College	French Language and Literature (16.0901)	0	0	0	3	0	0	0
Randolph Macon College	Spanish Language and Literature (16.0905)	0	0	0	3	0	0	0



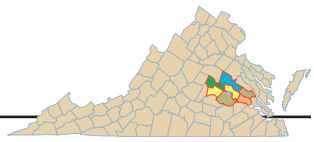
Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
Randolph Macon College	English Language and Literature, General (23.0101)	0	0	0	16	0	0	0
Randolph Macon College	Biology, General (26.0101)	0	0	0	8	0	0	0
Randolph Macon College	Mathematics (27.0101)	0	0	0	1	0	0	0
Randolph Macon College	Religion/Religious Studies (38.0201)	0	0	0	2	0	0	0
Randolph Macon College	Philosophy (38.0101)	0	0	0	1	0	0	0
Randolph Macon College	Physics, General (40.0801)	0	0	0	4	0	0	0
Randolph Macon College	Chemistry, General (40.0501)	0	0	0	5	0	0	0
Randolph Macon College	Psychology, General (42.0101)	0	0	0	25	0	0	0
Randolph Macon College	Social Sciences and History, Other (45.9999)	0	0	0	2	0	0	0
Randolph Macon College	Sociology (45.1101)	0	0	0	15	0	0	0
Randolph Macon College	International Relations and Affairs (45.0901)	0	0	0	13	0	0	0
Randolph Macon College	Political Science, General (45.1001)	0	0	0	11	0	0	0
Randolph Macon College	Economics, General (45.0601)	0	0	0	1	0	0	0
Randolph Macon College	Economics, Other (45.0699)	0	0	0	39	0	0	0
Randolph Macon College	History, General (45.0801)	0	0	0	12	0	0	0
Randolph Macon College	Drama/Theater Arts, General (50.0501)	0	0	0	3	0	0	0
Randolph Macon College	Fine/Studio Arts (50.0702)	0	0	0	1	0	0	0
Randolph Macon College	Arts Management (50.0704)	0	0	0	5	0	0	0
Randolph Macon College	Art History, Criticism and Conservation (50.0703)	0	0	0	2	0	0	0
Randolph Macon College	Music, General (50.0901)	0	0	0	1	0	0	0
Randolph Macon College	Accounting (52.0301)	0	0	0	8	0	0	0
U of R	Environmental Science/Studies (03.0102)	0	0	0	5	0	0	0
U of R	African Studies (05.0101)	0	0	0	1	0	0	0
U of R	American Studies/Civilization (05.0102)	0	0	0	8	0	0	0
U of R	Asian Studies (05.0103)	0	0	0	3	0	0	0
U of R	European Studies (05.0106)	0	0	0	3	0	0	0
U of R	Latin American Studies (05.0107)	0	0	0	3	0	0	0
U of R	Women's Studies (05.0207)	0	0	0	2	0	0	0
U of R	Area, Ethnic and Cultural Studies, Other (05.9999)	0	0	0	1	0	0	0
U of R	General Retailing Operations (08.0705)	0	1	0	0	0	0	0
U of R	Journalism (09.0401)	0	0	0	20	0	0	0

Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
U of R	Information Sciences and Systems (11.0401)	0	10	2	17	0	0	0
U of R	Computer and Information Sciences, General (11.0101)	0	0	0	15	0	0	0
U of R	General Teacher Education, Other (13.1299)	0	0	0	0	0	0	0
U of R	Physical Education Teaching and Coaching (13.1314)	0	0	0	3	0	0	0
U of R	Classics and Classical Languages and Literatures (16.1201)	0	0	0	1	0	0	0
U of R	Spanish Language and Literature (16.0905)	0	0	0	17	0	0	0
U of R	German Language and Literature (16.0501)	0	0	0	2	0	0	0
U of R	French Language and Literature (16.0901)	0	0	0	4	0	0	0
U of R	Law (LL.B., J.D.) (22.0101)	0	0	0	0	163	0	0
U of R	Paralegal/Legal Assistant (22.0103)	0	10	1	1	0	0	0
U of R	English Language and Literature, General (23.0101)	0	0	0	36	0	2	0
U of R	Speech and Rhetorical Studies (23.1001)	0	0	0	34	0	0	0
U of R	Liberal Arts and Sciences/Liberal Studies (24.0101)	0	1	3	23	0	15	0
U of R	Biology, General (26.0101)	0	0	0	54	0	1	0
U of R	Biochemistry (26.0202)	0	0	0	1	0	0	0
U of R	Mathematics (27.0101)	0	0	0	5	0	0	0
U of R	Multi/Interdisciplinary Studies, Other (30.9999)	0	0	0	2	0	0	0
U of R	Religion/Religious Studies (38.0201)	0	0	0	3	0	0	0
U of R	Philosophy (38.0101)	0	0	0	2	0	0	0
U of R	Chemistry, General (40.0501)	0	0	0	9	0	0	0
U of R	Physics, General (40.0801)	0	0	0	1	0	0	0
U of R	Psychology, General (42.0101)	0	0	0	41	0	5	0
U of R	Criminal Justice Studies (43.0104)	0	0	0	7	0	0	0
U of R	Community Organization, Resources and Services (44.0201)	0	0	0	0	0	0	0
U of R	History, General (45.0801)	0	0	0	23	0	4	0
U of R	Economics, General (45.0601)	0	0	0	19	0	0	0
U of R	International Economics (45.0605)	0	0	0	8	0	0	0
U of R	Sociology (45.1101)	0	0	0	28	0	0	0
U of R	International Relations and Affairs (45.0901)	0	0	0	10	0	0	0



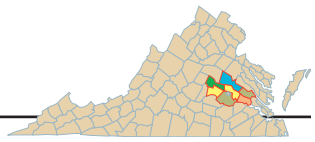
Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
U of R	Political Science, General (45.1001)	0	0	0	69	0	0	0
U of R	Music, General (50.0901)	0	0	0	5	0	0	0
U of R	Art History, Criticism and Conservation (50.0703)	0	0	0	9	0	0	0
U of R	Fine/Studio Arts (50.0702)	0	0	0	8	0	0	0
U of R	Drama/Theater Arts, General (50.0501)	0	0	0	8	0	0	0
U of R	Health and Medical Administrative Services, Other (51.0799)	0	0	0	2	0	0	0
U of R	Business Administration and Management, General (52.0201)	0	0	0	208	0	75	0
U of R	Accounting (52.0301)	0	0	0	46	0	0	0
U of R	Human Resources Management (52.1001)	0	5	3	20	0	0	0
U of R	Organizational Behavior Studies (52.1003)	0	6	0	46	0	0	0
VCU	Mass Communications (09.0403)	0	0	0	110	0	56	0
VCU	Computer and Information Sciences, General (11.0101)	0	0	0	32	0	12	0
VCU	Information Sciences and Systems (11.0401)	0	0	0	111	0	12	0
VCU	Special Education, General (13.1001)	0	0	0	1	0	26	0
VCU	Education Administration and Supervision, General (13.0401)	0	0	0	0	0	42	0
VCU	Curriculum and Instruction (13.0301)	0	0	0	0	0	24	0
VCU	Education, General (13.0101)	0	0	0	0	0	77	14
VCU	Health Teacher Education (13.1307)	0	0	0	28	0	0	0
VCU	Art Teacher Education (13.1302)	0	0	0	39	0	5	0
VCU	Reading Teacher Education (13.1315)	0	0	0	0	0	5	0
VCU	Physical Education Teaching and Coaching (13.1314)	0	0	0	0	0	1	0
VCU	Adult and Continuing Teacher Education (13.1201)	0	0	0	0	0	11	0
VCU	Counselor Education Counseling and Guidance Services (13.1101)	0	0	0	0	0	25	0
VCU	Bioengineering and Biomedical Engineering (14.0501)	0	0	0	22	0	10	1
VCU	Chemical Engineering (14.0701)	0	0	0	14	0	0	0
VCU	Electrical, Electronics and Communication Engineering (14.1001)	0	0	0	23	0	0	0
VCU	Mechanical Engineering (14.1901)	0	0	0	26	0	0	0

Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
VCU	Engineering, Other (14.9999)	0	0	0	0	0	5	2
VCU	Foreign Languages and Literatures, General (16.0101)	0	0	0	24	0	0	0
VCU	Gerontological Services (19.0705)	0	0	0	0	0	6	0
VCU	English Creative Writing (23.0501)	0	0	0	0	0	6	0
VCU	English Language and Literature, General (23.0101)	0	0	0	86	0	14	0
VCU	General Studies (24.0102)	0	0	0	49	0	0	0
VCU	Microbiology/Bacteriology (26.0501)	0	0	0	0	0	2	6
VCU	Anatomy (26.0601)	0	0	0	0	0	4	3
VCU	Genetics, Plant and Animal (26.0613)	0	0	0	0	0	2	2
VCU	Biostatistics (26.0615)	0	0	0	0	0	2	3
VCU	Biochemistry (26.0202)	0	0	0	0	0	2	5
VCU	Biology, General (26.0101)	0	0	0	83	0	5	0
VCU	Physiology, Human and Animal (26.0706)	0	0	0	0	0	6	5
VCU	Pathology, Human and Animal (26.0704)	0	0	0	0	0	0	2
VCU	Pharmacology, Human and Animal (26.0705)	0	0	0	0	0	3	5
VCU	Mathematics (27.0101)	0	0	0	25	0	8	0
VCU	Multi/Interdisciplinary Studies, Other (30.9999)	0	0	0	0	0	37	0
VCU	Parks, Recreation and Leisure Studies (31.0101)	0	0	0	31	0	50	0
VCU	Religion/Religious Studies (38.0201)	0	0	0	22	0	0	0
VCU	Philosophy (38.0101)	0	0	0	10	0	0	0
VCU	Chemistry, General (40.0501)	0	0	0	20	0	4	8
VCU	Physical Sciences, General (40.0101)	0	0	0	19	0	0	0
VCU	Physics, General (40.0801)	0	0	0	8	0	5	0
VCU	Psychology, General (42.0101)	0	0	0	231	0	11	19
VCU	Criminal Justice/Law Enforcement Administration (43.0103)	0	0	0	107	0	43	0
VCU	Forensic Tech./Technician (43.0106)	0	0	0	11	0	0	0
VCU	Social Work (44.0701)	0	0	0	34	0	184	8
VCU	Public Administration (44.0401)	0	0	0	0	0	37	6
VCU	History, General (45.0801)	0	0	0	49	0	8	0
VCU	Urban Affairs/Studies (45.1201)	0	0	0	20	0	12	0



Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
VCU	Sociology (45.1101)	0	0	0	45	0	5	0
VCU	Political Science, General (45.1001)	0	0	0	52	0	0	0
VCU	Music - General Performance (50.0903)	0	0	0	34	0	12	0
VCU	Painting (50.0708)	0	0	0	31	0	0	0
VCU	Sculpture (50.0709)	0	0	0	31	0	1	0
VCU	Fine Arts and Art Studies, Other (50.0799)	0	0	0	0	0	18	0
VCU	Art History, Criticism and Conservation (50.0703)	0	0	0	13	0	12	3
VCU	Fashion Design and Illustration (50.0407)	0	0	0	59	0	0	0
VCU	Drama/Theater Arts, General (50.0501)	0	0	0	39	0	12	0
VCU	Photography (50.0605)	0	0	0	22	0	0	0
VCU	Design and Visual Communications (50.0401)	0	0	0	98	0	19	0
VCU	Crafts, Folk Art and Artisanry (50.0201)	0	0	0	16	0	0	0
VCU	Dance (50.0301)	0	0	0	10	0	0	0
VCU	Interior Design (50.0408)	0	0	0	42	0	0	0
VCU	Nursing (R.N. Training) (51.1601)	0	0	0	211	0	0	0
VCU	Nursing Science (Post-R.N.) (51.1608)	0	0	0	0	0	0	3
VCU	Nursing, Other (51.1699)	0	0	0	0	0	69	0
VCU	Nursing Anesthetist (Post-R.N.) (51.1604)	0	0	0	0	0	21	0
VCU	Medicine (M.D.) (51.1201)	0	0	0	0	163	0	0
VCU	Medical Genetics (51.1306)	0	0	0	0	0	5	0
VCU	Medical Technology (51.1005)	0	0	0	14	0	6	0
VCU	Health System/Health Services Administration (51.0701)	0	0	0	0	0	31	2
VCU	Dentistry (D.D.S., D.M.D.) (51.0401)	0	0	0	0	80	0	0
VCU	Dental Clinical Sciences/Graduate Dentistry (M.S., Ph.D.) (51.0501)	0	0	0	0	0	16	0
VCU	Dental Hygienist (51.0602)	0	0	0	16	0	0	0
VCU	Health and Medical Diagnostic and Treatment Services, Other (51.0999)	0	0	0	12	0	0	0
VCU	Health Professions and Related Sciences, Other (51.9999)	0	0	0	0	0	0	2
VCU	Vocational Rehabilitation Counseling (51.2310)	0	0	0	0	0	28	0
VCU	Rehabilitation/Therapeutic Services, Other (51.2399)	0	0	0	0	0	9	0

Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
VCU	Physical Therapy (51.2308)	0	0	0	0	0	5	0
VCU	Pharmacy, Other (51.2099)	0	0	0	0	0	6	7
VCU	Occupational Therapy (51.2306)	0	0	0	1	0	23	0
VCU	Pharmacy (B. Pharm., Pharm.D.) (51.2001)	0	0	0	0	105	0	0
VCU	Public Health, General (51.2201)	0	0	0	0	0	18	0
VCU	Accounting (52.0301)	0	0	0	49	0	1	0
VCU	Business/Managerial Economics (52.0601)	0	0	0	25	0	2	0
VCU	Business Administration and Management, General (52.0201)	0	0	0	196	0	116	8
VCU	International Business (52.1101)	0	0	0	0	0	0	0
VCU	Business Marketing and Marketing Management (52.1401)	0	0	0	46	0	0	0
VCU	Taxation (52.1601)	0	0	0	0	0	5	0
VCU	Business, General (52.0101)	0	0	0	0	0	30	0

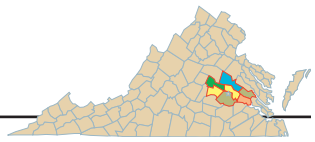


WIA IX Training Providers List

Provider Name	Contact Information	List of Programs/Courses
A-Plus Computer Education Inc.	2807 N Parham Road Suite 354 Richmond VA 23294-4432 Phone: 804-527-0311 Email: loren@a-pluscomputer.com Web: www.a-pluscomputer.com	A+ Certification (COMPTIA) Certified Directory Engineer Certified Internet Webmaster Associate Certified Internet Webmaster Professional Certified Novell Administrator (CNA) Certified Novell Engineer (CNE) Cisco Certified Network Administrator E-Biz+ Certification (COMPTIA) I-Net + Certification (COMPTIA) IT Project + Certification (COMPTIA) Linux+ Certification (COMPTIA) Master Certified Internet Webmaster Master Certified Internet Webmaster Series MCSA - CompTia Option MCSA Microsoft Option Microsoft Certified Database Administrator (MCDBA) Microsoft Certified Professional (MCP) Microsoft Certified Solution Developer (MCSD) Microsoft Certified Systems Engineer (MCSE) Microsoft Certified Trainer (MCT) Network+ Certification (COMPTIA) Server + Certification (Comptia)
Become New Beauty Institute	9550 Midlothian Tpk Suite 115 Richmond VA 23236-4900 Phone: 804-320-8269 Email: becomenewschool@aol.com	Cosmetology
Bon Secours School of Medical Imaging	8550 Magellan Pky-Ste 1100 Richmond VA 23226 Phone: 804-281-8478 Email: kim_likens@bshsi.com Web: www.bonsecours.com	Radiologic Technology
Chesterfield Technical Center	10101 Courthouse Road Chesterfield VA 23832 Phone: 804-768-6160 Email: sfoote@chesterfield.k12.va.us	Practical Nursing
Creative Image School of Cosmetology	4880 Finlay Avenue-Bldg C Richmond VA 23231 Phone: 804-226-7915 Email: adanceranointed@aol.com	Cosmetology
D and F Glamour World	3500 Mechanicsville Turnpike Richmond VA 23223 Phone: 804-321-5259	Arts and Science of Nail Technology Cosmetology
ECPI Technical College	800 Moorefield Park Dr Richmond VA 23236-3686 Phone: 804-330-5533 Web: www.ecpi.edu	A+ Prep Computer Technology - Diploma Program Fiber Optics Installer Information Technology/Computer Programmer Information Technology/Computer Programmer Microsoft Certified Systems Engineer (MCSE) Networking and Router Administration

WIA IX Training Providers List
(continued)

Provider Name	Contact Information	List of Programs/Courses
Family Care Inc.	5001 W. Broad St. Suite 302 Richmond VA 23230-3035 Phone: 804-288-2111 Email: bonnie@www.familycareinc.net Web: www.familycareinc.net	Nurse Aide Education Program
Hanover County Public Schools Alternative Education	200 Berkley St Ashland VA 23005 Phone: 804-365-4560 Email: hanover@hanover.k12.va.us Web: www.hanover.k12.va.us	Adult Basic Education English as a Second Language GED
Henrico County Public Schools St. Marys Practical Nursing	201 East Nine Mile Road Highland Springs VA 23075 Phone: 804-328-4095 Email: alunholz@henrico.k12.va.us Web: www.henrico.k12.va.us/adulteducatio	Nurse Aide Practical Nursing
His and Hers Nail Spa and Academy	7601-C West Broad St Richmond VA 23294 Phone: 804-565-8050 Email: u-n-mind@attbi.com	Nail Technician
John Tyler Community College	13101 Jefferson Davis Highway Chester VA 23831 Phone: 804-769-4000 Email: admissions@jt.cc.va.us Web: www.jt.cc.va.us	College Courses
Moseley-Flint School of Real Estate	8543 Mayland Drive-Parkham Park Bld Richmond VA 23294 Phone: 804-270-9121 Email: tgoodall@erols.com	Real Estate Principles
Peoples Income Tax School	4915 Radford Ave-Suite 100A Richmond VA 23230 Phone: 804-204-1040 Email: info@peoplestax.com Web: www.peoplestax.com	Comprehensive Individual Tax Preparation Course
Productivity Point International	10800 Midlothian Turnpike,#126 Richmond VA 23235 Phone: 804-794-1145 Email: dwinburne@ppi-richmond.com Web: www.ppi-richmond.com	Certified Internet Webmaster Cisco Certified Network Associate Boot Camp Microsoft Certified Solution Developer Microsoft Certified Systems Administrator Microsoft Certified Systems Engineer
Professional Skills Center Bryant and Stratton	8141 Hull Street Road Richmond VA 23235 Phone: 804-745-2444 Email: jdnicholson@bryantstratton.edu Web: www.psctraining.com	Medical Billing Professional Medical Coding



WIA IX Training Providers List
(continued)

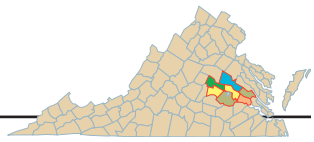
Provider Name	Contact Information	List of Programs/Courses
Qualitas Solutions	1602 Rolling Hills Drive-Suite 212 Richmond VA 23229 Phone: 804-282-8588 Email: mlucas@qstrain.com Web: www.QualitasSolutions.com	A+ A+ and Network+ Cisco Certified Network Associate 2.0 (CCNA) Exchange Administrator 5.5/2000 Microsoft Certified Systems Administrator (MCSA) Microsoft Certified Systems Engineer (MCSE) Custom Microsoft Office 2000 Microsoft Office 2000-Office Manager Class
Richmond Academy of Massage	2004 Bremo RoadSuite 102 Richmond VA 23226-2442 Phone: 804-282-5003	Massage Therapy
Richmond School of Health and Technology	421 East Franklin St.,3-rd Floor Richmond VA 23218 Phone: 804-780-0167	Medical Assistant Pharmacy Technician Practical Nursing
Trojan Beauty College	21500 Chesterfield Avenue Ettrick VA 23803 Phone: 804-524-9745	Barbering Cosmetology
Virginia School of Technology	1001 Boulders Parkway-Suite 305 Richmond VA 23225 Phone: 804-323-1020 Email: MCJaniga@vaschooloftech.com Web: www.vaschooloftech.com	Administrative Office Specialist Court Reporting-Day School Court Reporting-Night School Massage Therapy Medical Office Specialist Scopist-Day School Scopist-Night School Travel Agent-Day School Travel Agent-Night School

V. Summary and Conclusions

Population trends in WIA IX, as in other parts of the United States, are currently dominated by the aging of the baby-boom generation. Between 2000 and 2010 this demographic phenomena will cause a major increase in the 55 and over population within the region. The net result of this increase will be a significant "graying" of the overall population.

One implication of this is that younger entry-level workers will be in short supply. This should elevate the importance of workforce services in facilitating the efficient and effective use of existing labor resources by getting younger trained workers into the workforce, and retraining or upgrading the skills of older displaced workers.

Another significant trend within WIA IX has to do with increasing employment in Services. It can be anticipated that employment increases in the Service sector – specifically, health care and education – will drive much of the demand for trained workers between 1998 and 2008.



Average Weekly Wage

Charles City County

INDUSTRY SECTOR	2002 ($)
****TOTAL****	508
AGRICULTURE	541
MINING	569
UTILITIES	D
CONSTRUCTION	624
MANUFACTURING	562
TRADE-WHOLESALE	D
TRADE-RETAIL	432
TRANSPORTATION	533
INFORMATION	D
FINANCE/INSURNC	D
REAL ESTATE	1,792
PROF/TECH SERV	D
MANAGMNT OF COS	D
ADMIN/WASTE SER	571
EDUCATIONAL SER	D
HEALTH CARE	D
ARTS/ENTER/REC	262
ACCOMMDATN/FOOD	259
OTHER SERVICES	375
GOVT TOTAL	470
GOVT FEDERAL	766
GOVT STATE	591
GOVT LOCAL	453
UNCLASSIFIED	0

Chesterfield County

INDUSTRY SECTOR	2002 ($)
****TOTAL****	646
AGRICULTURE	354
MINING	D
UTILITIES	1,191
CONSTRUCTION	680
MANUFACTURING	967
TRADE-WHOLESALE	1,096
TRADE-RETAIL	407
TRANSPORTATION	675
INFORMATION	855
FINANCE/INSURNC	961
REAL ESTATE	596
PROF/TECH SERV	992
MANAGMNT OF COS	1,165
ADMIN/WASTE SER	444
EDUCATIONAL SER	409
HEALTH CARE	631
ARTS/ENTER/REC	205
ACCOMMDATN/FOOD	223
OTHER SERVICES	405
GOVT TOTAL	670
GOVT FEDERAL	971
GOVT STATE	637
GOVT LOCAL	596
UNCLASSIFIED	0

"D" indicates nondisclosed data.
Source: Covered Employment and Wage data, Annualized 2002.

Average Weekly Wage

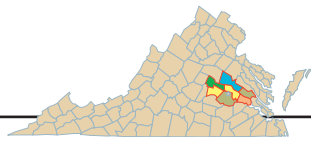
Goochland County

INDUSTRY SECTOR	2002 ($)
****TOTAL****	628
AGRICULTURE	459
MINING	839
UTILITIES	D
CONSTRUCTION	689
MANUFACTURING	816
TRADE-WHOLESALE	816
TRADE-RETAIL	410
TRANSPORTATION	357
INFORMATION	D
FINANCE/INSURNC	995
REAL ESTATE	474
PROF/TECH SERV	683
MANAGMNT OF COS	1,154
ADMIN/WASTE SER	398
EDUCATIONAL SER	D
HEALTH CARE	500
ARTS/ENTER/REC	392
ACCOMMDATN/FOOD	207
OTHER SERVICES	686
GOVT TOTAL	556
GOVT FEDERAL	633
GOVT STATE	592
GOVT LOCAL	522
UNCLASSIFIED	0

Hanover County

INDUSTRY SECTOR	2002 ($)
****TOTAL****	576
AGRICULTURE	450
MINING	D
UTILITIES	D
CONSTRUCTION	652
MANUFACTURING	668
TRADE-WHOLESALE	796
TRADE-RETAIL	427
TRANSPORTATION	652
INFORMATION	660
FINANCE/INSURNC	804
REAL ESTATE	675
PROF/TECH SERV	710
MANAGMNT OF COS	1,272
ADMIN/WASTE SER	474
EDUCATIONAL SER	D
HEALTH CARE	658
ARTS/ENTER/REC	D
ACCOMMDATN/FOOD	230
OTHER SERVICES	466
GOVT TOTAL	588
GOVT FEDERAL	788
GOVT STATE	637
GOVT LOCAL	573
UNCLASSIFIED	430

"D" indicates nondisclosed data.
Source: Covered Employment and Wage data, Annualized 2002.



Average Weekly Wage

Henrico County

INDUSTRY SECTOR	2002 ($)
****TOTAL****	744
AGRICULTURE	328
MINING	859
UTILITIES	D
CONSTRUCTION	723
MANUFACTURING	863
TRADE-WHOLESALE	993
TRADE-RETAIL	445
TRANSPORTATION	610
INFORMATION	1,005
FINANCE/INSURNC	1,158
REAL ESTATE	622
PROF/TECH SERV	960
MANAGMNT OF COS	1,230
ADMIN/WASTE SER	483
EDUCATIONAL SER	548
HEALTH CARE	703
ARTS/ENTER/REC	292
ACCOMMDATN/FOOD	247
OTHER SERVICES	426
GOVT TOTAL	645
GOVT FEDERAL	1,049
GOVT STATE	602
GOVT LOCAL	629
UNCLASSIFIED	0

New Kent County

INDUSTRY SECTOR	2002 ($)
****TOTAL****	464
AGRICULTURE	513
MINING	D
UTILITIES	D
CONSTRUCTION	522
MANUFACTURING	524
TRADE-WHOLESALE	678
TRADE-RETAIL	338
TRANSPORTATION	377
INFORMATION	D
FINANCE/INSURNC	D
REAL ESTATE	341
PROF/TECH SERV	447
MANAGMNT OF COS	D
ADMIN/WASTE SER	318
EDUCATIONAL SER	D
HEALTH CARE	606
ARTS/ENTER/REC	260
ACCOMMDATN/FOOD	193
OTHER SERVICES	355
GOVT TOTAL	535
GOVT FEDERAL	613
GOVT STATE	649
GOVT LOCAL	520
UNCLASSIFIED	0

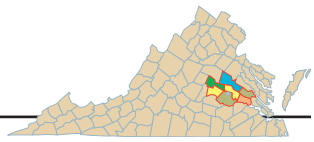
"D" indicates nondisclosed data.
Source: Covered Employment and Wage data, Annualized 2002.

Average Weekly Wage

Powhatan County

INDUSTRY SECTOR	2002 ($)
****TOTAL****	547
AGRICULTURE	293
MINING	D
UTILITIES	D
CONSTRUCTION	589
MANUFACTURING	545
TRADE-WHOLESALE	1,138
TRADE-RETAIL	357
TRANSPORTATION	496
INFORMATION	D
FINANCE/INSURNC	687
REAL ESTATE	541
PROF/TECH SERV	755
MANAGMNT OF COS	D
ADMIN/WASTE SER	303
EDUCATIONAL SER	D
HEALTH CARE	399
ARTS/ENTER/REC	362
ACCOMMDATN/FOOD	205
OTHER SERVICES	460
GOVT TOTAL	586
GOVT FEDERAL	716
GOVT STATE	619
GOVT LOCAL	528
UNCLASSIFIED	0

"D" indicates nondisclosed data.
Source: Covered Employment and Wage data, Annualized 2002.



Unemployment Rate Trends

Charles City County

Year	Rate
2002	5.7
2001	6.4
2000	2.7
1999	2.8
1998	3.2

Year	Rate
1997	4.7
1996	4.8
1995	5.8
1994	6.6
1993	8.1

Chesterfield County

Year	Rate
2002	3.0
2001	2.5
2000	1.5
1999	1.9
1998	2.1

Year	Rate
1997	2.8
1996	3.0
1995	3.1
1994	3.7
1993	4.1

Goochland County

Year	Rate
2002	3.2
2001	2.3
2000	1.4
1999	1.7
1998	2.1

Year	Rate
1997	2.5
1996	2.3
1995	2.9
1994	3.7
1993	4.3

Hanover County

Year	Rate
2002	2.8
2001	2.3
2000	1.2
1999	1.5
1998	1.8

Year	Rate
1997	2.5
1996	2.2
1995	2.2
1994	2.8
1993	3.4

Henrico County

Year	Rate
2002	3.5
2001	3.1
2000	1.6
1999	2.0
1998	2.1

Year	Rate
1997	2.7
1996	2.9
1995	2.9
1994	3.3
1993	3.9

New Kent County

Year	Rate
2002	3.5
2001	3.3
2000	1.6
1999	2.0
1998	2.6

Year	Rate
1997	2.8
1996	3.2
1995	3.1
1994	4.3
1993	4.8

Powhatan County

Year	Rate
2002	2.6
2001	2.1
2000	1.3
1999	1.6
1998	1.8

Year	Rate
1997	2.7
1996	2.3
1995	2.6
1994	3.3
1993	3.5

Source: Local Area Unemployment Statistics.

Population by Age

Charles City County

	1990	2000	2010	2020	2030
0-14	1,255	1,237	1,134	1,153	1,184
15-24	835	818	773	708	762
25-34	1,033	786	813	768	762
35-44	1,015	1,215	963	961	933
45-54	743	1,207	1,264	1,021	1,093
55+	1,401	1,663	2,453	3,189	3,565
Total	6,282	6,926	7,400	7,800	8,300

Chesterfield County

	1990	2000	2010	2020	2030
0-14	51,349	60,250	57,291	66,021	73,789
15-24	28,306	33,073	40,313	36,177	43,196
25-34	37,758	33,702	43,835	49,997	44,080
35-44	41,522	47,270	42,181	52,693	60,449
45-54	23,628	42,597	50,896	44,171	55,698
55+	26,711	43,011	81,483	116,940	134,789
Total	209,274	259,903	316,000	366,000	412,000

Goochland County

	1990	2000	2010	2020	2030
0-14	2,517	2,954	3,219	3,789	5,046
15-24	1,658	1,520	2,530	2,710	2,935
25-34	2,665	2,161	1,964	3,100	3,203
35-44	2,513	3,250	3,076	2,650	4,119
45-54	1,793	2,887	3,957	3,599	3,059
55+	3,017	4,091	6,654	9,453	10,838
Total	14,163	16,863	21,400	25,300	29,200

Hanover County

	1990	2000	2010	2020	2030
0-14	13,191	19,229	22,764	27,810	31,532
15-24	8,737	10,055	13,298	14,276	17,776
25-34	10,312	10,211	14,959	17,257	17,306
35-44	10,812	16,275	15,900	20,827	22,964
45-54	7,819	13,356	16,020	14,646	19,765
55+	12,435	17,194	23,058	27,984	29,857
Total	63,306	86,320	106,000	122,800	139,200

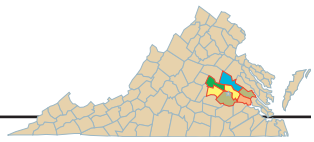
Henrico County

	1990	2000	2010	2020	2030
0-14	42,084	54,652	63,440	69,999	75,533
15-24	29,340	30,603	31,761	36,145	40,926
25-34	42,341	41,138	40,310	38,935	43,350
35-44	36,011	45,028	47,420	47,303	46,178
45-54	22,577	37,178	45,089	48,106	48,072
55+	45,528	53,701	72,981	94,512	110,941
Total	217,881	262,300	301,000	335,000	365,000

New Kent County

	1990	2000	2010	2020	2030
0-14	2,166	2,741	2,909	3,253	3,836
15-24	1,309	1,416	1,826	1,952	2,260
25-34	1,828	1,666	1,523	1,988	2,116
35-44	2,017	2,646	2,184	1,997	2,603
45-54	1,281	2,323	2,836	2,358	2,206
55+	1,844	2,670	4,922	7,252	8,378
Total	10,445	13,462	16,200	18,800	21,400

2010 - 2030 data are projections.
Source: Virginia Employment Commission 8/03, U.S. Census Bureau.



Population by Age

Powhatan County

	1990	2000	2010	2020	2030
0-14	2,838	4,352	5,305	6,280	8,121
15-24	2,124	2,647	4,030	4,181	5,071
25-34	3,124	3,396	3,687	4,602	4,505
35-44	2,817	4,370	4,393	3,971	5,094
45-54	1,885	3,525	4,851	4,793	4,126
55+	2,540	4,087	7,635	12,272	15,183
Total	15,328	22,377	29,900	36,100	42,100

2010 - 2030 data are projections.
Source: Virginia Employment Commission 8/03, U.S. Census Bureau.

Employment by Industry

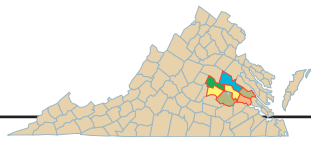
Charles City County

INDUSTRY SECTOR	2002
****TOTAL****	1,498
AGRICULTURE	76
MINING	19
UTILITIES	D
CONSTRUCTION	115
MANUFACTURING	292
TRADE-WHOLESALE	D
TRADE-RETAIL	71
TRANSPORTATION	245
INFORMATION	D
FINANCE/INSURNC	D
REAL ESTATE	7
PROF/TECH SERV	D
MANAGMNT OF COS	D
ADMIN/WASTE SER	60
EDUCATIONAL SER	D
HEALTH CARE	D
ARTS/ENTER/REC	50
ACCOMMDATN/FOOD	52
OTHER SERVICES	88
GOVT TOTAL	360
GOVT FEDERAL	15
GOVT STATE	13
GOVT LOCAL	331
UNCLASSIFIED	0

Chesterfield County

INDUSTRY SECTOR	2002
****TOTAL****	109,140
AGRICULTURE	216
MINING	D
UTILITIES	510
CONSTRUCTION	8,201
MANUFACTURING	11,506
TRADE-WHOLESALE	3,678
TRADE-RETAIL	17,839
TRANSPORTATION	3,917
INFORMATION	2,683
FINANCE/INSURNC	5,616
REAL ESTATE	1,651
PROF/TECH SERV	4,206
MANAGMNT OF COS	2,117
ADMIN/WASTE SER	7,629
EDUCATIONAL SER	680
HEALTH CARE	7,133
ARTS/ENTER/REC	1,633
ACCOMMDATN/FOOD	8,345
OTHER SERVICES	3,456
GOVT TOTAL	18,062
GOVT FEDERAL	3,213
GOVT STATE	2,983
GOVT LOCAL	11,867
UNCLASSIFIED	0

"D" indicates nondisclosed data.
Source: Covered Employment and Wage data, Annualized 2002.



Employment by Industry

Goochland County

INDUSTRY SECTOR	2002
****TOTAL****	5,824
AGRICULTURE	62
MINING	81
UTILITIES	D
CONSTRUCTION	1,004
MANUFACTURING	221
TRADE-WHOLESALE	299
TRADE-RETAIL	453
TRANSPORTATION	51
INFORMATION	D
FINANCE/INSURNC	89
REAL ESTATE	44
PROF/TECH SERV	274
MANAGMNT OF COS	470
ADMIN/WASTE SER	274
EDUCATIONAL SER	D
HEALTH CARE	419
ARTS/ENTER/REC	330
ACCOMMDATN/FOOD	186
OTHER SERVICES	265
GOVT TOTAL	1,265
GOVT FEDERAL	32
GOVT STATE	567
GOVT LOCAL	666
UNCLASSIFIED	0

Hanover County

INDUSTRY SECTOR	2002
****TOTAL****	39,976
AGRICULTURE	191
MINING	D
UTILITIES	D
CONSTRUCTION	5,839
MANUFACTURING	3,811
TRADE-WHOLESALE	3,392
TRADE-RETAIL	5,002
TRANSPORTATION	943
INFORMATION	742
FINANCE/INSURNC	745
REAL ESTATE	532
PROF/TECH SERV	1,443
MANAGMNT OF COS	556
ADMIN/WASTE SER	1,964
EDUCATIONAL SER	D
HEALTH CARE	3,191
ARTS/ENTER/REC	D
ACCOMMDATN/FOOD	2,647
OTHER SERVICES	1,417
GOVT TOTAL	4,731
GOVT FEDERAL	162
GOVT STATE	572
GOVT LOCAL	3,997
UNCLASSIFIED	1

"D" indicates nondisclosed data.
Source: Covered Employment and Wage data, Annualized 2002.

Employment by Industry

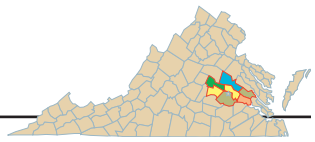
Henrico County

INDUSTRY SECTOR	2002
****TOTAL****	166,182
AGRICULTURE	31
MINING	69
UTILITIES	D
CONSTRUCTION	9,012
MANUFACTURING	11,117
TRADE-WHOLESALE	7,534
TRADE-RETAIL	22,531
TRANSPORTATION	3,342
INFORMATION	4,393
FINANCE/INSURNC	23,613
REAL ESTATE	2,802
PROF/TECH SERV	10,822
MANAGMNT OF COS	8,989
ADMIN/WASTE SER	11,507
EDUCATIONAL SER	1,067
HEALTH CARE	17,744
ARTS/ENTER/REC	1,740
ACCOMMDATN/FOOD	11,133
OTHER SERVICES	5,028
GOVT TOTAL	13,637
GOVT FEDERAL	626
GOVT STATE	1,875
GOVT LOCAL	11,136
UNCLASSIFIED	0

New Kent County

INDUSTRY SECTOR	2002
****TOTAL****	2,962
AGRICULTURE	29
MINING	D
UTILITIES	D
CONSTRUCTION	512
MANUFACTURING	164
TRADE-WHOLESALE	28
TRADE-RETAIL	433
TRANSPORTATION	28
INFORMATION	D
FINANCE/INSURNC	D
REAL ESTATE	19
PROF/TECH SERV	58
MANAGMNT OF COS	D
ADMIN/WASTE SER	143
EDUCATIONAL SER	D
HEALTH CARE	443
ARTS/ENTER/REC	167
ACCOMMDATN/FOOD	177
OTHER SERVICES	67
GOVT TOTAL	641
GOVT FEDERAL	41
GOVT STATE	45
GOVT LOCAL	555
UNCLASSIFIED	0

"D" indicates nondisclosed data.
Source: Covered Employment and Wage data, Annualized 2002.



Employment by Industry

Powhatan County

INDUSTRY SECTOR	2002
****TOTAL****	5,213
AGRICULTURE	24
MINING	D
UTILITIES	D
CONSTRUCTION	979
MANUFACTURING	106
TRADE-WHOLESALE	142
TRADE-RETAIL	550
TRANSPORTATION	53
INFORMATION	D
FINANCE/INSURNC	87
REAL ESTATE	34
PROF/TECH SERV	161
MANAGMNT OF COS	D
ADMIN/WASTE SER	169
EDUCATIONAL SER	D
HEALTH CARE	259
ARTS/ENTER/REC	62
ACCOMMDATN/FOOD	116
OTHER SERVICES	123
GOVT TOTAL	2,202
GOVT FEDERAL	51
GOVT STATE	1,315
GOVT LOCAL	836
UNCLASSIFIED	0

"D" indicates nondisclosed data.
Source: Covered Employment and Wage data, Annualized 2002.